

SERVICE DES ANTIQUITÉS DE L'ÉGYPTE

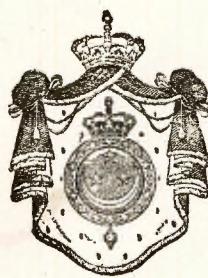
EXCAVATIONS AT SAQQARA

THE TOMB OF HEMAKA

BY

WALTER B. EMERY

WITH THE COLLABORATION OF
ZAKI YUSEF SAAD



CAIRO
GOVERNMENT PRESS, BULĀQ
1938



CONTENTS

	Page
PREFACE ...	VII
INTRODUCTION ...	1
Chapter	
I. DESCRIPTION OF THE MASTABA ...	3
II. THE MAGAZINES AND THEIR CONTENTS ...	10
III. FLINT IMPLEMENTS ...	18
IV. THE DISKS ...	28
V. WOODEN TOOLS, ETC. ...	33
VI. LABELS ...	36
VII. MISCELLANEOUS OBJECTS ...	40
VIII. BAGS AND BOXES ...	41
IX. TEXTILES ...	43
X. ARROWS, ETC. ...	45
XI. THE POTTERY, BY ZAKI YUSEF SAAD ...	49
XII. POT MARKS, BY ZAKI YUSEF SAAD ...	53
XIII. STONE VESSELS, ETC. ...	55
XIV. SEALINGS ...	64

LIST OF PLATES

FRONTISPIECE. The disk (Cat. No. 307). By WINIFRED M. BRUNTON.

1. Plan of the Tomb of Hemaka.
2. Cross sections of the Tomb of Hemaka.
3. View of the tomb from the air. Taken by the Royal Egyptian Army Air Force.
4. (a) General view of the magazines and the superstructure.
(b) General view of the pit and stairway.
(c) Foundations of a false door.
(d) The East façade of the superstructure.
5. (a) View of the pit from the North.
(b) Entrance gate on the stairway.
(c) View of the pit from the South.
(d) Stone blocks in the pit.
6. (a) Entrance stairway. Looking down.
(b) Entrance stairway. Looking up.
(c) Portcullis blocking entrance to the burial chamber.
(d) Portcullis blocking of stairway.
7. (a) Interior of the burial chamber.
(b) Interior of the burial chamber.
(c) Evidence of magazine roofing.
(d) Flint implements in Magazine CC.
8. Objects in Magazine Z.
9. (a) Objects in Magazine AA.
(b) Coil of rope in Magazine AA.
(c) Leather bag in Magazine AA.
(d) Pottery in Magazine Y.
(e) Pottery in Magazine Y.
10. (a) Pottery in Magazine C.
(b) Pottery in Magazine D.
(c) Pottery in Magazine E.
(d) Pottery in Magazine F.
11. Examples of flint implements.
- 12-14. The disks.

15. Sickles.
16. Adze handles.
- 17-18. Labels.
19. Miscellaneous objects.
- 20-21. Examples of arrows.
 22. (a) Arrow heads.
 - (b) Ivory spear head.
23. (a) Inlaid wooden box.
- (b) Coil of rope.
- 24-26. Examples of pottery.
27. Pottery forms.
- 28-29. Examples of stone vessels.
30. Stone pedestals.
31. Examples of stone tables.
- 32-37. Types of stone vessels, etc.
- 38-42. Pot marks.

PREFACE

The Archaic Cemetery at Saqqara of roughly 360,000 metres in area is situated at the extreme north of the necropolis. Apparently an unproductive field to a large extent it was left untouched by Mariette. In 1912-1914 J. E. Quibell excavated two small areas which he published in rather a summarised form in 1923.

On the completion of his work on the Step Pyramid C. M. Firth turned his attention to the site in 1930 and cleared further areas, but due to his untimely death in the following year his results were left unpublished beyond the usual preliminary report in the *Annales du Service des Antiquités* (1). In 1933 some of the larger tombs were planned for Dr. G. Reisner by Mr. W. S. Smith to enable him to incorporate them in his important work on tomb development (2).

In October 1935 the work was placed in my hands and after a preliminary examination I came to the conclusion that so valuable a site should no longer be worked in small haphazard areas. Only the systematic clearance of the whole site square by square could possibly give us the hoped for results. I explained my views to M. Lacau who agreed that after I had planned and recorded Firth's tombs this method of clearance should be adopted and the whole cemetery excavated with periodical publications of the results.

M. Lacau impressed on me the fact that this cemetery is more or less the last chance that we have of solving the numerous problems of the archaic period of Egypt's history.

Having completed the recording of the main block of Firth's excavations we turned our attention to the area devoted to the 1st Dynasty tombs which are situated on the eastern edge of the cemetery overlooking the village of Abusir. Interesting results were soon obtained and these were crowned by the discoveries in the Tomb of Hemaka; it is with these discoveries that this report deals.

I cannot adequately express my thanks to Mrs. Winifred Brunton for the magnificent colour plate of the disk which she was kind enough to paint for me. The value of this plate is enhanced by the fact that photographs in no way portray the beauty and artistic quality of this disk, but as can be seen this is admirably reproduced in her painting.

(1) *Annales du Service des Antiquités de l'Egypte*. Tome XXXI, p. 45.

(2) G. A. REISNER. *The Development of the Egyptian Tomb down to the Accession of Cheops*. 1936.

I must also express my indebtedness to Dr. G. A. Reisner for much help and encouragement, and must gratefully acknowledge the service that his recent publication on the development of the Egyptian tomb has been to me in the preparation of this report. Mr. W. S. Smith has also helped me with his advice and his knowledge of the site; I am indebted to Mr. A. Lucas for analysis and help on the various materials, and to Dr. L. Keimer for notes on the contents of some of the vases.

Saqqara, October 1936.

WALTER B. EMERY

THE TOMB OF HEMAKA

INTRODUCTION

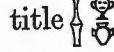
Firth commenced the excavation of the tomb on January 15th, 1931, giving it the number 3035. He cleared the pit and subterranean chambers and traced the stairway and exterior walls of the superstructure, but he left the body of the superstructure untouched. In clearing part of the stairway he discovered a long wooden beam which had apparently been used in the roofing. He also found in this area part of a small archaic stele probably connected with a mastaba of Dyn. III that he was compelled to remove in order to examine the head of the stairway. The clearance of the pit yielded numerous fragments of stone vessels and a number of pottery jars of Type 1. With the jars were a number of mud sealings impressed with the names of Udimu and Hemaka, but they were in such a fragmentary condition that Firth was unable to identify the name of the latter. One pot bore the name of Semerkhet, but this was probably intrusive. (Page 55).

In chamber 1, which probably contained the burial, Firth found fragments of small crystal vessels (Pl. 28), one of which was inscribed with the name of Semti. With them were numerous fragments of stone vases, a small ivory hand probably from a wand, a small slate spoon, and fragments of an ivory gaming board with bulls' legs. (Plate 19).

This completed Firth's work on the tomb which, as has already been stated, was left unplanned. In 1933 with the agreement of the Director General Mr. W. S. Smith of the Harvard Expedition at Giza planned the tomb for inclusion in Dr. Reisner's work on Archaic Tomb Development. Unfortunately by this time the pit and stairway had become largely filled with drift and debris so that his plan was necessarily incomplete (1). I therefore decided early in my work to re-clear the tomb to enable me to make a detail plan for publication with the objects found by Firth in 1931.

Late in March 1936 we commenced the re-excavation and in clearing the top of the mastaba which Firth had left untouched we soon discovered the outlines of the group of magazines in the south-east corner. Digging down into Magazine C we uncovered an intact group of wine jars bearing sealings on which the names of Udimu and Hemaka were easily decipherable. When further magazines were cleared and the name of Hemaka was found on all jar sealings we came to the conclusion that he must be the owner of the tomb. This conclusion was more or less confirmed by the discovery of his name on a wooden sickle and two ivory labels found in Magazine Z. On the completion of the clearance of the magazines we re-excavated the stairway, pit, and burial chambers.

(1) G. A. REISNER, *Development of the Egyptian tomb down to the Accession of Cheops*, P. 65. Fig. 46.

Like other great characters at the dawn of Egypt's history we know little of Hemaka and beyond the salient fact that he held the highest official position under the fifth king of Dyn. I he remains a shadowy figure. It is probable that by the accession of Udimu (Den) the unification of Egypt was more or less complete, and although we have evidence of war in the north it is certain that the greater part of the Delta submitted to his rule. We see in Udimu's reign a great advance in arts and crafts and ample evidence of a highly civilized state under efficient and well organised rule. In all this Hemaka undoubtedly played a great part for he held the post of Chancellor and stood in high favour with the king, bearing the title  which Griffith suggests meant "ruling in the king's heart" (1). His name and title "seal-bearer" (i.e. chancellor) appear on the labels of Udimu from Abydos in conjunction with that of the king and it is probable that he was closely connected with the events to which they refer. Unfortunately we have no clear idea as to what these events were. Newberry (2) has shown that the Udimu-Hemaka labels probably bore the name of an oil (*tehenu*) that was contained in a jar to which the label was originally attached, and that the dating of the label was made by a pictorial representation of the events of a single year of the king's reign. Assuming Newberry's hypothesis to be correct the events of that year appear to be roughly as follows: a feast of Osiris was held at which the king performed a ceremonial dance before the god, a warlike expedition was undertaken, possibly by river, which resulted in the capture of a fortified town (3).

One of the major problems in connection with Hemaka is the question as to why he built his tomb so far away from that of his master at Abydos. Again, why is his tomb so different and more elaborate in type than that of the king? These questions raise the important point, are the tombs at Abydos really the burials of the kings or are they cenotaphs? When we take the comparison of Hemaka's tomb with that of Udimu in conjunction with that of Neith-hetep and Aha, the question becomes more imperative.

The following is a list of the relics of Hemaka found prior to the discoveries at Saqqara.

Ebony tablet bearing his name and title. Found by Amélineau at Abydos. (*Les Nouvelles fouilles d'Abydos*. Vol. III, Pl. XXXVII, 3).

Ebony tablet of similar design to that found by Amélineau. Found by Petrie at Abydos. (*Royal Tombs of Abydos*. Vol. I, Pls. XI and XV).

Fragment of a similar tablet. Found by Petrie at Abydos. (*Royal Tombs of Abydos*. Vol. I, Pls. XI and XV).
Numerous impressions on jar sealings of which there are seven different examples. Found by Petrie and Amélineau at Abydos. (*Royal Tombs of Abydos*. Vol. I, Pl. XXXV. Vol. II, Pl. XX, and **AMÉLINEAU**, *Nouvelles fouilles d'Abydos*).

(1) PETRIE. *Royal tombs of Abydos*. Vol. II, p. 53.

(2) NEWBERRY. *Wooden and ivory tablets of Dyn. I*, (*Proc. Soc. Biblical Archaeology*. Vol. XXIV, p. 279).

(3) HALL. *Cambridge Ancient History*. Vol. I, p. 271.

Chapter I.

DESCRIPTION OF THE MASTABA

EXTERIOR OF THE SUPERSTRUCTURE (Plate 4c,d).

The superstructure is rectangular in shape measuring 57·30 m. from north to south and 26 m. from east to west. The maximum height at the present time is 3·45 m. In common with other mastabas of this date and type the exterior walls have a slight inward batter at an angle 26 on 1. The exterior of the superstructure is decorated with a series of niches of the so-called "palace façade" type; the longer walls having fourteen niches and the short walls having six. The niches are of uniform size, 1·60 m. in width and 1·20 m. in depth, and are placed at even intervals of 2·25 m. These intervals are again uniformly divided into three small niches 0·39 m. in width and 0·16 m. in depth. All the niches and façade have been constructed with very small bricks (size 17×5×5 cms.), and on the whole have a uniform order of construction (see Fig. 1). The whole of the exterior of the superstructure was faced with a thick layer

CONSTRUCTION OF FALSE DOORS

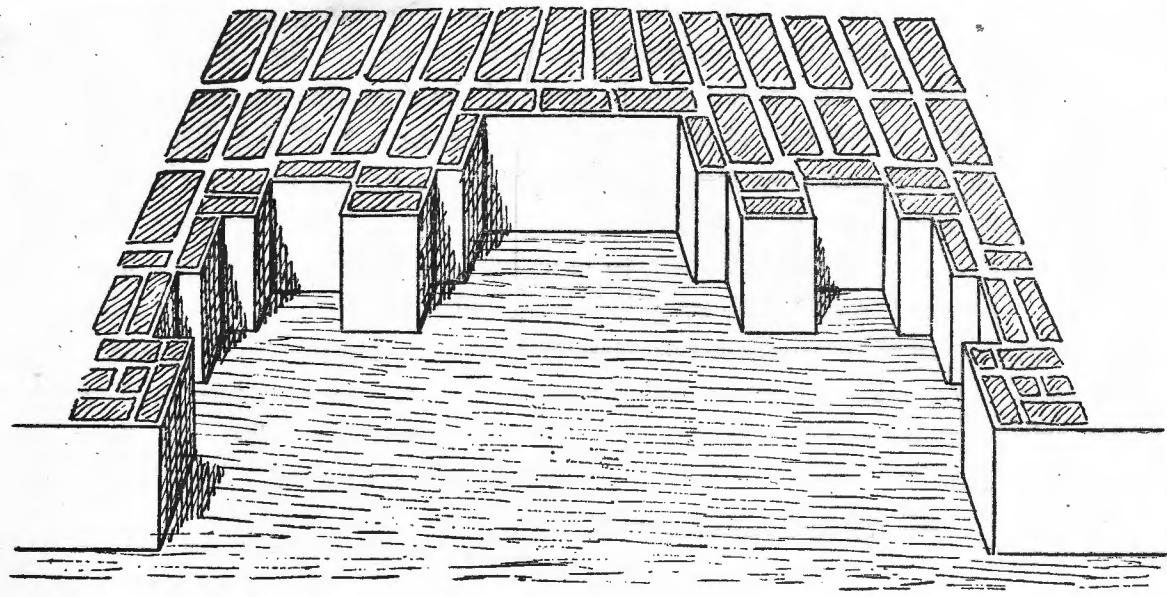


FIG. 1

of mud plaster which was whitewashed (sulphate of lime), streaks of red painted on the whitewash, in imitation of wood, were found inside some of the niches.

With mastabas of this type the presence of a fender wall is apparently usual but no traces of this wall were found. Nevertheless it is probable that it existed, for all four sides of the façade were built on a light brick platform which probably formed the paving of the corridors made by the fender wall round the superstructure. If it existed its destruction was probably due to the building of later mastabas in close proximity. (Plate 3).

THE MAIN ENCLOSURE WALLS OF THE SUPERSTRUCTURE.

The four enclosure walls are built of bricks (size $23 \times 13 \times 5$ cms.) placed in even layers and rows without any attempt at bonding. On the long walls they are placed longitudinally from east to west, and on the short walls from north to south. The interior of the enclosure walls is lined with two layers of bonded bricks which in the case of the long walls are placed longitudinally north and south, and in the short walls east to west. The thickness of the enclosure walls is as follows :—

North wall. 3·75 m.
South wall. 4·10 m.
East wall. 4·10 m.
West wall. 4·20 m.

THE MAGAZINES. (Plate 4 a).

The interior of the superstructure is divided into forty-five magazines for position of which see Plate 1. A peculiar feature is the complete absence of any bonding of the brickwork at the corners of these rooms. The floor levels in some of the magazines were raised by a packing of sand (see Fig. 2). For details of this feature see magazines Y, Z, AA, BB, CC. Five of the magazines in the south-east area were connected by doors 1·50 m. in height with light wooden lintels 0·10 m. in thickness ; the exact purpose of this feature is unknown but it is interesting to note that these five magazines appear to have been exclusively devoted to large wine jars. All the magazines were roofed with roughly hewn wooden planks 7 cms. in thickness laid longitudinally and supported by rough wooden beams 15 cms. in diameter placed diagonally and let into the walls. Above the wooden planking was placed a thick layer of reed matting and above this was brickwork in alternate layers of headers and stretchers. (See Fig. 2 and Plates 2 and 7c). The position of the magazines NN, OO, PP and QQ definitely shows that no rooms of this nature were built over the pit. (See Plate 1).

THE STAIRWAY. (Plate 6 a, b.).

A ramp and stairway running from east to west, with an average width of 7·15 m., gives access to the pit. The incline of the ramp commences at a point 9·00 m. to the east of the east wall of the superstructure and 4·00 m. from this point ; at a depth of 3·00 m., are

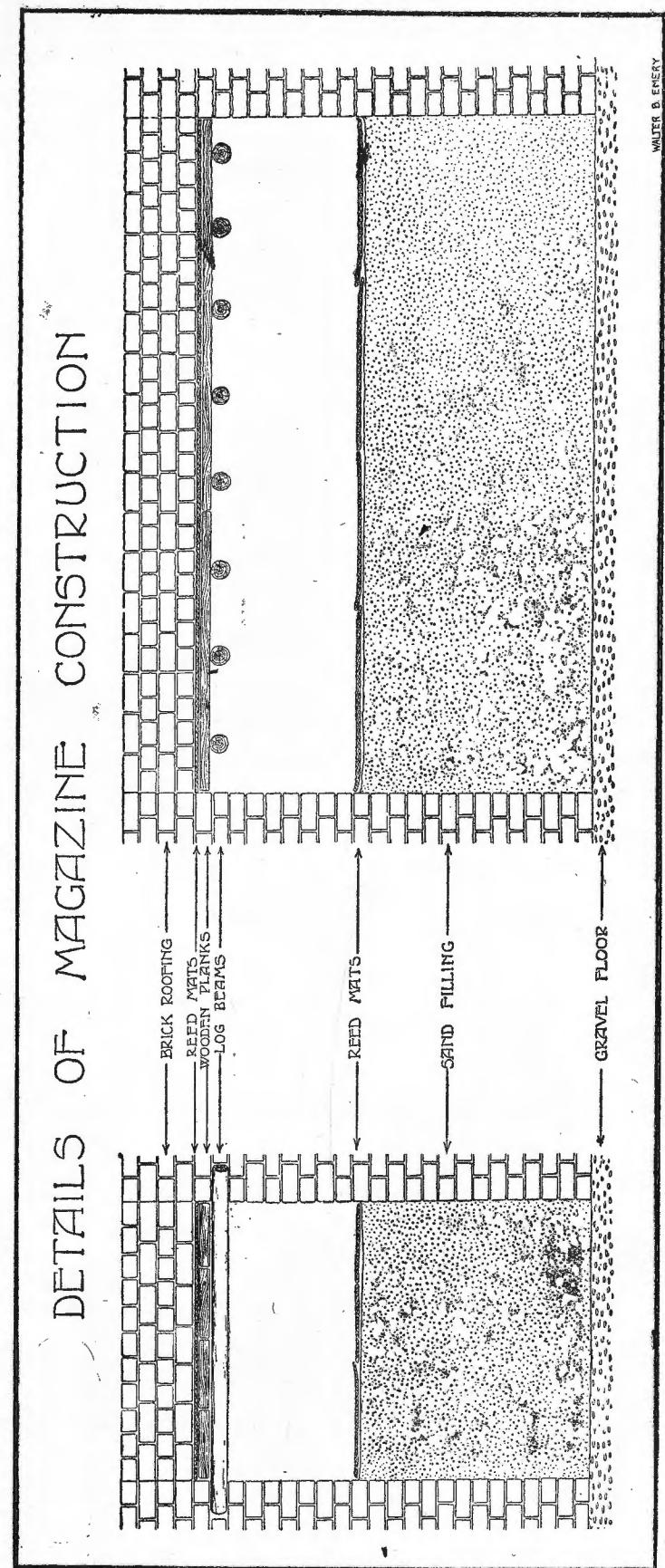


FIG. 2

the jambs of what must have been a brick gateway. (Plate 5b). This gateway has a width of 1·15 m. and a depth of 1·00 m. It stands at the head of the descending stairway, the steps of which are built of brick. The ramp leading to the stairway is cut in the gravel and the walls are supported by brickwork, for the formation of which see Plate 2. It is only at the level at which the gate was built that the rock stratum commences. Below the stairway the brick walls which line the ramp continue as far down as the commencement of the rock stratum. The stairway has been blocked at three points, 3·20 m. 4·85 m. and 7·55 m. from the gateway, with portculli. These were lowered through grooves cut in the walls. (See Plate 2). The first two portculli were removed by plunderers and only the grooves remain to show their original position but in the third groove the lower portion of the portcullis is still in position. (Plate 6d). This is made of limestone and measures 2·21 m. in width and 0·35 m. in thickness; the edges of the base and sides were bevelled. Four rounded grooves were cut vertically down both sides of the stone meeting underneath; these grooves measure 0·5 m. in width. It is obvious that they were intended for the lowering ropes which placed the portcullis in position. The perfection achieved in the cutting and facing of this stone shows a very high standard of the mason's craftsmanship.

Beyond this third portcullis is a platform which reaches to the opening of the pit and below this is a brick step followed by a sloping platform of brick and three steps which brings us directly before the door of the burial chamber. The presence of the brick platform and steps is accounted for by the uneven nature of the rock below them. On the north edge of the stairway, where it enters the pit, are three holes which measure roughly 0·30 m. in diameter; it is almost certain that these holes were cut to receive wooden posts for the support of the roofing of the stairway.

THE PIT. (Plates 4 b and 5 a, c, d).

The pit measures 9·50 m. from north to south and 4·90 m. from east to west and has a total depth of 11·75 m. from the top of the superstructure. At the commencement of the rock stratum, which is 5 m. above the bottom of the pit, a wide ledge was cut on all four sides, this has an average measurement of 0·90 m. in width and 0·75 m. in height. On the north and south sides three rectangular recesses have been cut at the base of the ledge and we may assume from their position (see Plate 1) that they were made to receive the architraves which supported the roof of the pit. Above the ledge the insecure gravel walls were retained by brickwork the formation of which is shown in Fig. 3. Above this again are the walls of the superstructure with bricks laid in header and stretcher formation.

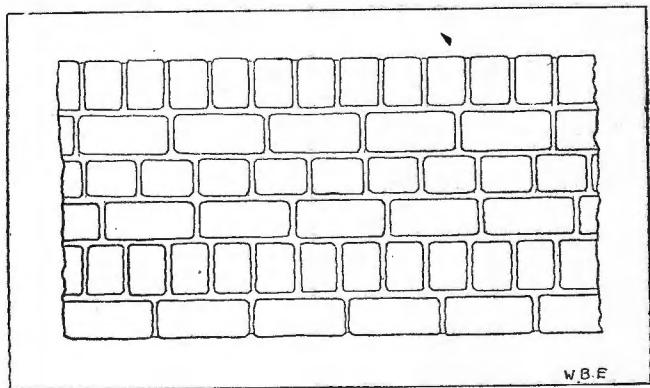


FIG. 3

When Firth excavated the pit he found two large rectangular blocks of limestone lying at the bottom measuring $2\cdot70$ m. \times $1\cdot00$ \times $0\cdot50$ m. and $2\cdot70 \times 1\cdot00 \times 0\cdot57$ m. (Plate 5d.). These may have been either the remains of pillars or architraves. The absence of magazines over the pit suggests a light roof which would be unable to bear the weight of such constructions. On the other hand unless we admit the existence of a double roof it is evident that the brick-lined shaft from the top of the superstructure to the roof ledge must have been filled with rubble. When we consider that this shaft measures $11\cdot10$ m. \times $7\cdot00$ m. \times $7\cdot00$ m., the vast weight of the filling would entail the construction of an enormously strong roof of which there is little or no evidence. Again, from the evidence of the recesses, why did the architraves span the pit on its longest side? Detailed examination of the flooring showed no traces of pillar bases. It is also certain from an examination of the brick walls above the ledges that no vault existed. Nevertheless one fact is certain, the roofing and filling of the pit must have been exceedingly strong, so strong that the first plunderers found it easier to force their way down the entrance stairway, cutting through the three stone portcullis, than to force an entry through the roof and filling. Future excavation in some of the neighbouring mastabas may give us an answer to this interesting problem.

Dr. Reisner (1) has pointed out that the hardened copper chisel was used in the cutting of the two large stones which lie in the pit and also of the portcullis, the facing of which was achieved by rubbing. Another important feature in connection with the early working of stone is the use of stone in place of mud brick in the building up of natural fissures in the burial chamber.

SUBTERRANEAN ROOMS. (Plate 7 a, b).

Three rooms were cut in the solid rock with doorways leading to them from the pit. Room 1, which was probably the burial chamber, is situated directly in front of the foot of the entrance stairway in the south-west corner of the pit. The door was blocked with a large limestone portcullis similar to that found on the stairway. (Plate 6 c). It presents a number of interesting features. It measures $1\cdot53$ m. in width and $0\cdot25$ m. in thickness. Three grooves for the lowering ropes run longitudinally down both sides of the stone and apparently terminate at the top with holes driven right through it. It is possible that the grooves continued above these holes but of this we have no evidence as the portcullis has been broken off just above them. Evidence for the first plundering of the tomb is shown by a hole cut through the base of this portcullis, this was obviously done before the collapse of the roof of the pit. After the roof had fallen, probably at a much later date, the tomb was plundered a second time, but owing to the debris which must have covered the lower part of the portcullis the robbers cut through the top of the stone just below the roof of the doorway. The room is rectangular in shape measuring $7\cdot70 \times 4\cdot80 \times 3\cdot10$ m. The walls were covered with a thick lime plaster, but before this was

(1) G. A. REISNER, *Development of the Egyptian Tomb down to the Accession of Cheops*, p. 122.

done a natural fissure in the north wall and some faults in the door jamb were built up with roughly dressed stone. As Firth found fragments of human bones and a skull in this room we may conclude that it was the burial chamber. A door in the north-west corner of the pit gives access to Room 2, which is roughly rectangular in shape and measures $3\cdot75 \times 5\cdot35 \times 1\cdot85$ m. The floor level was raised to 0·70 m. above that of the pit. On the other side of the pit directly opposite Room 2 a door leads into Room 3 also roughly rectangular in shape and measuring $3\cdot80 \times 3\cdot40 \times 1\cdot80$ m. Here also the floor level is raised 0·85 m. above that of the pit.

COMPARATIVE SIZES OF THE GREAT MASTABAS OF DYN. I WITH THAT OF HEMAKA.

1. Neith-hetep at Nagadah. (DE MORGAN. *Tombeau Royal*; BORCHARDT. *Z.A. XXXVI. Das Grab des Menes*). Contained sixteen magazines in the superstructure which were not used but filled with rubble and sand (?)
Area. N.S. 53·4 m., E.W. 26·7 m.
2. Q.S. 2185 at Saqqara. (QUIBELL. *Archaic Mastabas*. Pl. V, p. 5). Nothing was found in the magazines of which there were fourteen.
Area. N.S. 42·0 m., E.W. 16·1 m.
3. Giza. Mastaba 7 at Giza. (PETRIE. *Gizeh and Rifeh*. Pl. VI, p. 2; (DARESSY. *Annales*. VI, p. 99). Dated to reign of Zet. Superstructure divided into five rooms the middle one of which was for the burial.
Area. N.S. 48·2 m., E.W. 22·0 m.
4. Tarkhan 1060 at Tarkhan. (PETRIE. *Tarkhan I and Memphis V*. Pl. XVIII, pp. 13-20; by Wainwright). Dated to reign of Zet. Fifteen magazines in the superstructure built over the pit. All filled with gravel.
Area. N.S. 34·3 m., E.W. 15·7 m.
5. Tarkhan 2050 at Tarkhan. (PETRIE. *Tarkhan II*, p. 5, Pl. XVIII). No magazines. Filled with gravel with pit in centre.
Area. N.S. 35·7 m., E.W. 15·15 m.
6. Tarkhan 2038 at Tarkhan. (PETRIE. *Tarkhan II*, p. 4 Pl. XVIII). No magazines. Burial pit in centre with descending ramp.
Area. N.S. 32·25 m., E.W. 12·75 m.

7. Hemaka., Forty-five magazines.

Area. N.S. 57.3 m. E.W. 26 m.

Table of sizes.

	N.S.	E.W.	
Hemaka	57.3 m.	26.0 m.	
Neith-hetep	53.4 m.	26.7 m.	Magaz.
Giza V.	48.2 m.	22.0 m.	Nefer-Baten (v. 26)
Q.S. 2185	42.0 m.	16.1 m.	
Tarkhan 2050	35.7 m.	15.15 m.	
Tarkhan 1060	34.3 m.	15.7 m.	
Tarkhan 2038	32.25 m.	12.75 m.	

The above comparison shows that the mastaba of Hemaka was a larger and more elaborate type than even the tomb of Neith-hetep. A detailed comparison cannot be made with the royal tombs at Abydos as the superstructures there have been destroyed. Nevertheless an examination of the substructures still leaves one with the impression of the superiority in size and conception of the mastaba of Hemaka.

Cratère avec nombreuses empreintes Aha
(Id. dans la Nau, 12 février 1938, et Cham d'Egypte, 1938, p. 284/5) : 49^m — 15^m 50.

Autre cratère du temple de Min (mentionné avec celle de "Hemaka" encore)
non reconnue, Ann. du Soudan, 31 (1931), p. 45/8 et pl. : 40^m — 22^m.

Chapter II.

THE MAGAZINES AND THEIR CONTENTS

MAGAZINE A. Measurements: 2·35 m. in length and 1·95 m. in width. The walls have been denuded to about 1·75 m. above the natural rock; as the filling consisted of clean sand we may assume that this magazine originally had a false floor built above the present existing height of the walls.
Contents: none.

MAGAZINE B. Measurements: 1·65 m. in length and 1·95 m. in width. As in A the walls are reduced to about 1·70 m. in height; with a clean sand filling which suggests a false floor.
Contents: none.

MAGAZINE C. Measurements: 7·10 m. in length and 1·85 m. in width. Walls standing to an average height of 2·00 m. Doors in the north and east walls lead into Magazines LL and D respectively.
Contents (Plate 10a). 188 red ware wine jars of which 80 were of Type 1, 103 of Type 2, and 5 of Type 9. (Cat. Nos. 447-634). The jars of Types 1 and 2 were mixed together and arranged in rows leaning against the south wall. Two layers were arranged in this manner and at the north end of the magazine a group of five small jars (Type 9) were placed on the top of them. All the jars of Type 1 and 2 had pottery caps covered with conical mud sealings impressed with the names of Udimu and Hemaka. (See Sealings). They also had pot marks. (See Pot Marks).

MAGAZINE D. Measurements: 7·00 m. in length and 1·85 m. in width. Walls standing to an average height of 2·00 m. Doors in the west and east walls lead into Magazines C and E respectively.
Contents (Plate 10b). 197 red ware wine jars of which 153 were of Type 2, 40 of Type 1, and 4 of Type 3. (Cat. Nos. 635-831). All three types were mixed together and were arranged in two layers in rows against the south wall. Jars of Types 1 and 2 had the usual pottery lid and conical mud sealing impressed with the names of Udimu and Hemaka. Type 3 had a round flat-topped sealing impressed with the name of Hemaka only.

MAGAZINE E. Measurements: 7·00 m. in length and 1·85 m. in width. Walls standing to an average height of 1·90 m. Doors in the west and east walls lead into Magazines D and F respectively.
Contents (Plate 10c). 182 red ware wine jars of Type 2. (Cat. Nos. 832-1013). Arranged in two layers in rows against the south wall. All had pottery caps covered with flat-topped circular mud sealings impressed with the name of Hemaka. (See Sealings and Pot Marks).

MAGAZINE F. Measurements: 7·00 m. in length and 1·85 m. in width. Walls standing to an average height of 1·85 m. Door in west wall leading to Magazine E.

Contents (Plate 10d). 169 red ware jars of which 104 were of Type 1, 60 of Type 2, and 5 of Type 4. (Cat. Nos. 1014-1182). All had pottery caps with conical mud sealings impressed with the names of Udimu and Hemaka (see Sealings), and incised pot marks (see Pot Marks). Near the door was a peculiar red ware bowl. Type 17. (Cat. No. 1183).

MAGAZINE G. Measurements: 4·95 m. in length and 2·00 m. in width. Walls standing to an average height of 1·75 m. Filling of clean sand, probably foundation of a false floor.

Contents: none.

MAGAZINE H. Measurements: 4·95 m. in length and 2·00 m. in width. Walls standing to an average height of 1·60 m. Filling of rubble.

Contents: none.

MAGAZINE I. Measurements: 4·95 m. in length and 1·95 m. in width. Average depth 1·70 m. Filling of clean sand to about 0·50 m. from the surface. Probably foundation for false floor.

Contents: a group of ox bones near the south wall.

MAGAZINE J. Measurements: 4·96 m. in length and 2·00 m. in width. Average depth 2·00 m. Filling of rubble.

Contents: none.

MAGAZINE K. Measurements: 4·95 m. in length and 2·00 m. in width. Average depth 2·00 m. Filling of rubble.

Contents: none.

MAGAZINE L. Measurements: 4·95 m. in length and 2·00 m. in width. Average depth 2·10 m. Filling of rubble.

Contents: disturbed ox bones.

MAGAZINE M. Measurements: 4·95 m. in length and 2·00 m. in width. Average depth 2·15 m. Filling of rubble.

Contents: disturbed ox bones;
seven roughly cut limestone disks.

MAGAZINE N. Measurements: 4·95 m. in length and 2·00 m. in width. Average depth 2·20 m. Filling of clean sand to a height of 1·50 m. Above this was drift sand in which there were fragments of reed matting.

Contents: none.

MAGAZINE O. Measurements: 4·95 m. in length and 2·00 m. in width. Average depth 2·20 m. Filling of rubble.

Contents: disturbed ox bones.

MAGAZINE P. Measurements: 4·90 m. in length and 2·00 m. in width. Average depth 2·25 m. Filling of rubble and drift sand.

Contents: fragments of wooden roofing beams.

MAGAZINE Q. Measurements: 4·80 m. in length and 2·00 m. in width. Average depth 2·20 m. Filling of rubble and drift sand.

Contents: none.

MAGAZINE R. Measurements: 4·95 m. in length and 2·00 m. in width. Average depth 2·20 m. Filling of rubble and drift sand.

Contents: none.

MAGAZINE S. Measurements: 4·90 m. in length and 2·00 m. in width. Average depth 2·40 m. Filling of rubble.

Contents: fragments of wooden roofing beams.

MAGAZINE T. Measurements: 4·80 m. in length and 2·00 m. in width. Average depth 2·35 m. Filling of rubble.

Contents: none.

MAGAZINE U. Measurements: 4·95 m. in length and 2·00 m. in width. Average depth 2·30 m. Filling of rubble.

Contents: none.

MAGAZINE V. Measurements: 4·90 m. in length and 2·00 m. in width. Average depth 2·40 m. Filling of rubble and drift sand.

Contents: none.

MAGAZINE W. Measurements: 4·90 m. in length and 2·00 m. in width. Average depth 3·40 m. Part of the roofing was found in position. (See Fig. 1). pl. 7, c

Contents: a disturbed group of pottery composed of:

- 36 red ware vases. Type 8. (Cat. Nos. 1271-1306).
- 5 red ware vases. Type 9. (Cat. Nos. 1307-1311).
- 26 red ware vases. Type 10. (Cat. Nos. 1312-1337).
- 2 flasks. Type 12. (Cat. Nos. 1338 and 1339).

MAGAZINE X. Measurements: 4·95 m. in length and 2·00 m. in width. Average depth 3·30 m. Fragments of the roofing beams remained in position in the walls.

Contents: 5 red ware vases. Type 9. Found near the east wall. (Cat. Nos. 1340-1344).

MAGAZINE Y. Measurements: 4·80 m. in length and 2·00 m. in width. Average depth 3·35 m. Filling of clean sand to a height of about 2·00 m. on which matting had originally been placed thus forming a false floor.

Contents (Plate 9d, e). At the west end of the magazine were stacked 52 red ware vases with a cream slip. All were stopped with unstamped conical mud sealings. They were all of Type 5. (Cat. Nos. 1184 to 1235). The floor in the eastern half of the magazine was covered with a series of pottery vessels obviously intended for an eating service; these consisted of:

- 9 red ware vases containing fruit and inscribed with the names of their contents. Type 7. (Cat. Nos. 1236-1244).
- 8 red ware plates. Type 15. (Cat. Nos. 1245-1252).
- 5 red ware dishes. Type 16. (Cat. Nos. 1253-1257).
- 8 large red ware bowls. Type 14. (Cat. Nos. 1258-1265).
- 3 small red ware bowls. Type 18. (Cat. Nos. 1266-1268).

MAGAZINE Z. Measurements: 4·80 m. in length and 2·00 m. in width. Average depth 3·25 m. Filling of clean sand to a height of 2·00 m. on which had been placed reed mats to form a false floor.

Contents (Plate 8). The following objects were found in the eastern half of the magazine:

- 4 wooden adze handles. (Cat. Nos. 341-344).
- Wooden object in the form of a disk, convex on one side and flat on the other. (Cat. No. 345).
- 36 wooden sickles with flint blades. (Cat. Nos. 346-382).
- Wooden sickle inscribed with the names of Semti and Hemaka. (Cat. No. 383).
- 17 wooden staffs. (Cat. Nos. 384-400).
- 5 uninscribed wooden labels. (Cat. Nos. 401-405).
- 2 ivory labels inscribed with the name of Hemaka. (Cat. Nos. 406-407).
- Ebony label inscribed with a record of events and the name of Zer. (Cat. No. 408).
- Animal foot bone. The end has been filed with cross grooves. (Cat. No. 417).

Fragment of limestone on which are painted in black the figures of a bull and a monkey. (Cat. No. 421).
Circular wooden box. (Cat. No. 422).
Inlaid wooden box which contained the disks. (See below). (Cat. No. 423).
2 cylindrical leather bags. (Cat. Nos. 425 and 426).
Fragments of matting from the floor. (Cat. No. 427).
Fragments of white cloth. (Cat. No. 428).
Flattened roll of papyrus. (Cat. No. 429).
Fragments of string. (Cat. No. 431).
Bundle of 200 arrows. (Cat. Nos. 433 and 434).
Leather quiver containing 144 arrows. (Cat. Nos. 435-440).
Convertible bone arrow head. (Cat. No. 441).
Three bone arrow heads. (Cat. Nos. 442-444).
45 disks of copper, stone, wood, horn and ivory. (Cat. Nos. 306-340).

MAGAZINE AA. Measurements : 4·90 m. in length and 2·00 m. in width. Average depth 3·40 m. Filling of clean sand to a height of about 2·00 m. thus forming a false floor on which was placed a layer of reed mats. Fragments of wooden planks and beams from the roof were found in the north-east corner of the magazine.

Contents (Plate 9 a, b, c). The following objects were found :

Large bag of soft leather (Cat. No. 424) containing the following :
6 large flint knives. (Cat. Nos. 1-6).
8 flint scrapers. Type 2. (Cat. Nos. 9-16).
4 flint scrapers. Type 3. (Cat. Nos. 32-35).
5 flint scrapers. Type 4. (Cat. Nos. 54-58).
4 flint scrapers. Type 5. (Cat. Nos. 114-117).
8 flint scrapers. Type 11. (Cat. Nos. 218-225).
28 flint scrapers. Type 12. (Cat. No. 230-257).
34 flint scrapers. Type 13. (Cat. Nos. 265-298).
8 copper piercers. (Cat. No. 409).
5 gaming pieces of horn. (Cat. No. 415).

Set of gaming pieces, 5 of ivory and 5 of wood. (Cat. No. 416).

The mouth of the leather bag was tied up with string and sealed. (See Sealings).

Near the north-west corner of the room lay a coil of flax rope in almost perfect preservation. (Cat. No. 429).

In the centre of the magazine lay a large group of flint implements composed of the following :

Large flint knife. Type 1. (Cat. No. 7).
11 flint scrapers. Type 2. (Cat. Nos. 17-27).

- 15 flint scrapers. Type 3. (Cat. Nos. 36-50).
- 53 flint scrapers. Type 4. (Cat. Nos. 54-110).
- 9 flint scrapers. Type 5. (Cat. Nos. 118-126).
- 11 flint scrapers. Type 6. (Cat. Nos. 127-137).
- 3 flint scrapers. Type 7. (Cat. Nos. 139-141).
- 2 flint scrapers. Type 8. (Cat. Nos. 144-145).
- 55 small flint knives. Type 10. (Cat. Nos. 152-207).

In the south-east corner were a flint knife. Type 1. (Cat. No. 8) and 2 red ware pots. Type 6. (Cat. Nos. 1269 and 1270).

MAGAZINE B.B. Measurements : 4·80 m. in length and 2·00 m. in width. Average depth 3·40 m. False floor above a filling of clean sand. The surface of the floor was originally covered with reed mats.

Contents. In the centre of the magazine lay a group of flint implements composed of the following :

- 4 scrapers. Type 2. (Cat. Nos. 28-31).
- 3 scrapers. Type 3. (Cat. Nos. 51-53).
- 3 scrapers. Type 4. (Cat. Nos. 111-113).
- 1 scraper. Type 6. (Cat. No. 138).
- 10 small knives. Type 10. (Cat. Nos. 208-217).
- 1 scraper. Type 11. (Cat. No. 226).
- 2 scrapers. Type 12. (Cat. Nos. 263 and 264).
- 4 scrapers. Type 13. (Cat. Nos. 302-305).

Also on the floor in the centre of the magazine were 6 small wooden objects of unknown use. They were found placed evenly in a row. (Cat. No. 418).

Near the south wall were a large wooden spear with an ivory head (Cat. No. 445) and three ivory objects of unknown use (Cat. No. 446).

MAGAZINE C.C. Measurements : 4·95 m. in length and 2·00 m. in width. Average depth 3·00 m. and filling to a height of about 2·00 m

Contents. Near the east wall lay a group of flint implements composed of the following :

- 3 scrapers. Type 8. (Cat. Nos. 146-148).
- 3 knives. Type 9. (Cat. Nos. 149-151).
- 3 scrapers. Type 11. (Cat. Nos. 227-229).
- 3 scrapers. Type 12. (Cat. Nos. 258-260).
- 2 scrapers. Type 13. (Cat. Nos. 299-300).
- 5 large nodules of flint. (Cat. No. 432).

MAGAZINE D.D. Measurements : 4.95 m. in length and 2.00 m. in width.
Average depth 2.75 m. Filled with rubble.
Contents : none.

MAGAZINE E.E. Measurements ; 4.90 m. in length and 2.00 m. in width.
Average depth 2.80 m. Filled width rubble.
Contents ; none.

MAGAZINE F.F. Measurements ; 4.80 m. in length and 2.00 m. in width.
Filled with rubble and drift sand.
Contents : none.

MAGAZINE G.G. Measurements : 2.65 m. in length and 2.65 m. in width.
Average depth 2.00 m. Filled with rubble.
Contents : none.

MAGAZINE H.H. Measurements : 2.50 m. in length and 2.65 m. in width.
Average depth 2.00 m. Filled with rubble.
Contents : none.

MAGAZINE I.I. Measurements ; 2.50 m. in length and 2.65 m. in width.
Average depth 2.00 m. Filled with rubble.
Contents ; none.

MAGAZINE J.J. Measurements : 2.50 m. in length and 2.65 m. in width.
Average depth 1.75 m. Filled with drift sand.
Contents : none.

MAGAZINE K.K. Measurements : 2.60 m. in length and 2.65 m. in width.
Average depth 1.30 m. Filled with drift sand.
Contents : none.

MAGAZINE L.L. Measurements : 3.95 m. in length and 2.05 m. in width.
Average depth 1.75 m. A door in the south wall leads into Magazine C.
Filled with drift sand and rubble.
Contents : none.

MAGAZINE M.M. Measurements : 5.25 m. in length and 2.05 m. in width.
Average depth 1.5 m. Part of the north wall and flooring have fallen
into the pit. Filled with drift sand and rubble.
Contents : none.

MAGAZINE N.N. Measurements : 3.20 m. in length and 2.00 m. in width.
Average depth 1.50 m. Part of the east wall and flooring have fallen into
the pit. Filled with rubble.
Contents : none.

MAGAZINE O.O. Measurements : 3·20 m. in length and 2·00 m. in width.
Average depth 1·40 m. The east wall and part of the flooring have fallen
into the pit. Filled with rubble.
Contents : none.

MAGAZINE P.P. Measurements ; 3·20 m. in length and 2·00 m. in width.
Average depth 1·45 m. The east wall and part of the flooring have fallen
into the pit. Filled with rubble.
Contents : none.

MAGAZINE Q.Q. Measurements : 3·20 m. in length and 1·95 m. in width.
Average depth 1·50 m. Filled with rubble.
Contents ; none.

MAGAZINE R.R. Measurements : 4·90 m. in length and 2·00 in width.
Average depth 1·60 m. Filled with rubble.
Contents : none.

MAGAZINE S.S. Measurements ; 4·80 m. in length and 2·00 m. in width.
Average depth 1·50 m. The south wall and part of the flooring have fallen
into the pit. Filled with drift.
Contents : none.

Chapter III. FLINT IMPLEMENTS

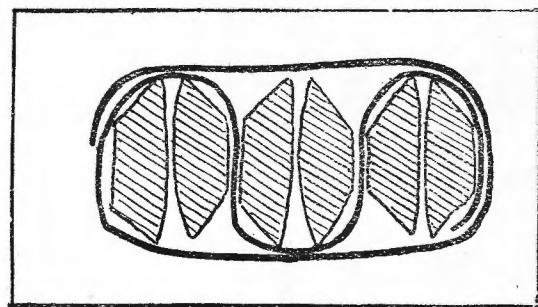


FIG. 4

The magazines of the tomb yielded a large quantity of flint implements, probably the largest group from any one period yet found. One group in Magazine AA was found carefully packed in a leather bag, the large knives placed side by side with the cutting edge uppermost, and some of the small scrapers were neatly wrapped in strips of papyrus (Fig. 4). The other groups were simply placed in heaps on the floors of the magazines.

Thirteen different types of flint implements were discovered (Fig. 5).

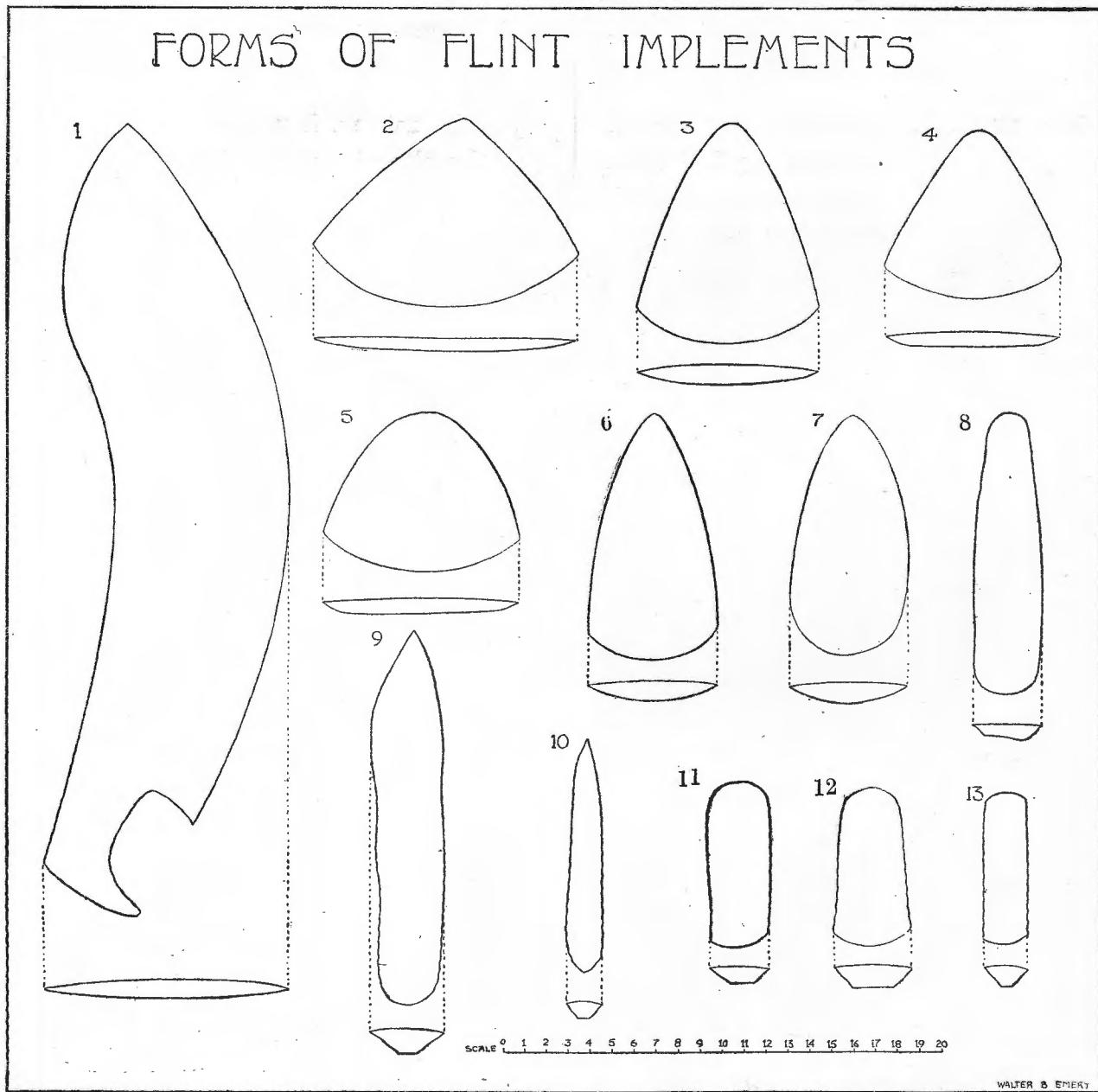


FIG. 5

WALTER B. EMERY

Type 1. Large broad knife with backward curving cutting edge and cut-out handle formed in the flint. In all examples the handle is small, the cut-out only giving place for three fingers. These knives are of particularly fine workmanship and show a quality of fine flint knapping hitherto unknown in such large implements after the Middle Predynastic Period. Knives of this design are fairly common to Dyn. I and have been found at Abydos; Naga ed-Der and Hierakonpolis, but they are greatly inferior both in size and quality to those found in the mastaba of Hemaka.

Types 2, 3, 4, 5, 6 and 7. Variations of the triangular scraper with one side unworked. They are made from a single large flake with worked edges. Scrapers of this type continued in use until Dyn. IV. (REISNER. *Mycerinus*, Pl. 18a, 10).

Type 8. Long and narrow scraper with rounded cutting edge at one end. It is made from a single large flake, flat on one side and bevelled on the other.

Type 9. Long and narrow knife, rounded at one end and pointed at the other. Made from a single flake, flat on one side and bevelled on the other.

Type 10. A smaller and narrower knife of similar form to Type 10.

Types 11, 12 and 13.—Variations of small scrapers with rounded cutting edges. Flat on one side and bevelled on the other.

For convenience the flint implements have been catalogued under their type numbers.

TYPE 1.

Cat. No. 1.	Size 320 mm. \times 75 mm.	From a leather bag found in Magazine AA.
Cat. No. 2.	Size 328 mm. \times 70 mm.	Ditto
Cat. No. 3.	Size 340 mm. \times 78 mm.	Ditto
Cat. No. 4.	Size 350 mm. \times 79 mm.	Ditto
Cat. No. 5.	Size 410 mm. \times 78 mm.	Ditto
Cat. No. 6.	Size 350 mm. \times 77 mm.	Ditto
Cat. No. 7.	Size 355 mm. \times 78 mm.	Found with a group of flints in the middle of Magazine AA.
Cat. No. 8.	Size 250 mm. \times 77 mm.	Found with two pots against the south wall of Magazine AA.

TYPE 2.

Cat. No. 9.	Size 98 mm. × 103 mm.	From a leather bag in Magazine AA.
Cat. No. 10.	Size 95 mm. × 132 mm.	Ditto.
Cat. No. 11.	Size 93 mm. × 108 mm.	Ditto.
Cat. No. 12.	Size 95 mm. × 115 mm.	Ditto.
Cat. No. 13.	Size 85 mm. × 109 mm.	Ditto.
Cat. No. 14.	Size 83 mm. × 110 mm.	Ditto.
Cat. No. 15.	Size 83 mm. × 111 mm.	Ditto.
Cat. No. 16.	Size 80 mm. × 105 mm.	Ditto.
Cat. No. 17.	Size 73 mm. × 93 mm.	From a group of flints in the middle of Magazine AA.
Cat. No. 18.	Size 85 mm. × 120 mm.	Ditto.
Cat. No. 19.	Size 95 mm. × 114 mm.	Ditto.
Cat. No. 20.	Size 103 mm. × 124 mm.	Ditto.
Cat. No. 21.	Size 93 mm. × 118 mm.	Ditto.
Cat. No. 22.	Size 86 mm. × 103 mm.	Ditto.
Cat. No. 23.	Size 85 mm. × 110 mm.	Ditto.
Cat. No. 24.	Size 82 mm. × 115 mm.	Ditto.
Cat. No. 25.	Size 94 mm. × 120 mm.	Ditto.
Cat. No. 26.	Size 81 mm. × 109 mm.	Ditto.
Cat. No. 27.	Size 78 mm. × 112 mm.	Ditto.
Cat. No. 28.	Size 90 mm. × 114 mm.	From the centre of Magazine BB.
Cat. No. 29.	Size 95 mm. × 110 mm.	Ditto.
Cat. No. 30.	Size 78 mm. × 106 mm.	Ditto.
Cat. No. 31.	Size 90 mm. × 120 mm.	Ditto.

TYPE 3.

Cat. No. 32.	Size 100 mm. × 75 mm.	From a leather bag in Magazine AA.
Cat. No. 33.	Size 90 mm. × 65 mm.	Ditto.
Cat. No. 34.	Size 90 mm. × 62 mm.	Ditto.
Cat. No. 35.	Size 98 mm. × 77 mm.	Ditto.
Cat. No. 36.	Size 92 mm. × 78 mm.	From the centre of Magazine AA.
Cat. No. 37.	Size 92 mm. × 67 mm.	Ditto.
Cat. No. 38.	Size 91 mm. × 73 mm.	Ditto.
Cat. No. 39.	Size 98 mm. × 80 mm.	Ditto.
Cat. No. 40.	Size 110 mm. × 98 mm.	Ditto.
Cat. No. 41.	Size 95 mm. × 74 mm.	Ditto.
Cat. No. 42.	Size 97 mm. × 87 mm.	Ditto.
Cat. No. 43.	Size 92 mm. × 65 mm.	Ditto.

Cat. No. 44.	Size 110 mm. × 80 mm.	From the centre of Magazine AA.
Cat. No. 45.	Size 103 mm. × 70 mm.	Ditto.
Cat. No. 46.	Size 90 mm. × 74 mm.	Ditto.
Cat. No. 47.	Size 95 mm. × 72 mm.	Ditto.
Cat. No. 48.	Size 86 mm. × 70 mm.	Ditto.
Cat. No. 49.	Size 90 mm. × 62 mm.	Ditto.
Cat. No. 50.	Size 93 mm. × 74 mm.	Ditto.
Cat. No. 51.	Size 90 mm. × 76 mm.	From the centre of Magazine BB.
Cat. No. 52.	Size 112 mm. × 70 mm.	Ditto.
Cat. No. 53.	Size 105 mm. × 76 mm.	Ditto.

TYPE 4.

Cat. No. 54.	Size 73 mm. × 85 mm.	From a leather bag in Magazine AA.
Cat. No. 55.	Size 75 mm. × 92 mm.	Ditto.
Cat. No. 56.	Size 78 mm. × 70 mm.	Ditto.
Cat. No. 57.	Size 68 mm. × 80 mm.	Ditto.
Cat. No. 58.	Size 85 mm. × 70 mm.	Ditto.
Cat. No. 59.	Size 98 mm. × 105 mm.	From the centre of Magazine AA.
Cat. No. 60.	Size 90 mm. × 85 mm.	Ditto.
Cat. No. 61.	Size 65 mm. × 90 mm.	Ditto.
Cat. No. 62.	Size 78 mm. × 80 mm.	Ditto.
Cat. No. 63.	Size 90 mm. × 95 mm.	Ditto.
Cat. No. 64.	Size 108 mm. × 115 mm.	Ditto.
Cat. No. 65.	Size 70 mm. × 70 mm.	Ditto.
Cat. No. 66.	Size 83 mm. × 92 mm.	Ditto.
Cat. No. 67.	Size 75 mm. × 87 mm.	Ditto.
Cat. No. 68.	Size 83 mm. × 70 mm.	Ditto.
Cat. No. 69.	Size 82 mm. × 66 mm.	Ditto.
Cat. No. 70.	Size 85 mm. × 90 mm.	Ditto.
Cat. No. 71.	Size 76 mm. × 61 mm.	Ditto.
Cat. No. 72.	Size 72 mm. × 80 mm.	Ditto.
Cat. No. 73.	Size 80 mm. × 86 mm.	Ditto.
Cat. No. 74.	Size 70 mm. × 60 mm.	Ditto.
Cat. No. 75.	Size 60 mm. × 90 mm.	Ditto.
Cat. No. 76.	Size 75 mm. × 96 mm.	Ditto.
Cat. No. 77.	Size 85 mm. × 60 mm.	Ditto.
Cat. No. 78.	Size 70 mm. × 105 mm.	Ditto.
Cat. No. 79.	Size 88 mm. × 90 mm.	Ditto.
Cat. No. 80.	Size 70 mm. × 80 mm.	Ditto.
Cat. No. 81.	Size 63 mm. × 83 mm.	Ditto.

Cat. No. 82.	Size 80 mm. × 100 mm. From the centre of Magazine AA.	
Cat. No. 83.	Size 70 mm. × 65 mm.	Ditto.
Cat. No. 84.	Size 85 mm. × 93 mm.	Ditto.
Cat. No. 85.	Size 106 mm. × 110 mm.	Ditto.
Cat. No. 86.	Size 55 mm. × 75 mm.	Ditto.
Cat. No. 87.	Size 63 mm. × 90 mm.	Ditto.
Cat. No. 88.	Size 80 mm. × 70 mm.	Ditto.
Cat. No. 89.	Size 55 mm. × 78 mm.	Ditto.
Cat. No. 90.	Size 90 mm. × 80 mm.	Ditto.
Cat. No. 91.	Size 60 mm. × 75 mm.	Ditto.
Cat. No. 92.	Size 91 mm. × 58 mm.	Ditto.
Cat. No. 93.	Size 65 mm. × 84 mm.	Ditto.
Cat. No. 94.	Size 64 mm. × 93 mm.	Ditto.
Cat. No. 95.	Size 100 mm. × 90 mm.	Ditto.
Cat. No. 96.	Size 86 mm. × 88 mm.	Ditto.
Cat. No. 97.	Size 65 mm. × 73 mm.	Ditto.
Cat. No. 98.	Size 75 mm. × 68 mm.	Ditto.
Cat. No. 99.	Size 77 mm. × 75 mm.	Ditto.
Cat. No. 100.	Size 64 mm. × 56 mm.	Ditto.
Cat. No. 101.	Size 82 mm. × 83 mm.	Ditto.
Cat. No. 102.	Size 69 mm. × 60 mm.	Ditto.
Cat. No. 103.	Size 70 mm. × 70 mm.	Ditto.
Cat. No. 104.	Size 65 mm. × 65 mm.	Ditto.
Cat. No. 105.	Size 70 mm. × 84 mm.	Ditto.
Cat. No. 106.	Size 70 mm. × 104 mm.	Ditto.
Cat. No. 107.	Size 70 mm. × 74 mm.	Ditto.
Cat. No. 108.	Size 75 mm. × 94 mm.	Ditto.
Cat. No. 109.	Size 115 mm. × 100 mm.	Ditto.
Cat. No. 110.	Size 70 mm. × 70 mm.	Ditto.
Cat. No. 111.	Size 85 mm. × 95 mm. From the centre of Magazine BB.	
Cat. No. 112.	Size 80 mm. × 75 mm.	Ditto.
Cat. No. 113.	Size 95 mm. × 100 mm.	Ditto.

TYPE 5.

Cat. No. 114.	Size 92 mm. × 85 mm. From a leather bag in Magazine AA.	
Cat. No. 115.	Size 58 mm. × 90 mm.	Ditto.
Cat. No. 116.	Size 75 mm. × 80 mm.	Ditto.
Cat. No. 117.	Size 60 mm. × 78 mm.	Ditto.
Cat. No. 118.	Size 62 mm. × 65 mm. From the centre of Magazine AA.	
Cat. No. 119.	Size 73 mm. × 85 mm.	Ditto.

Cat. No. 120.	Size 82 mm. × 94 mm.	From the centre of Magazine AA.
Cat. No. 121.	Size 78 mm. × 72 mm.	Ditto.
Cat. No. 122.	Size 89 mm. × 90 mm.	Ditto.
Cat. No. 123.	Size 66 mm. × 80 mm.	Ditto.
Cat. No. 124.	Size 73 mm. × 65 mm.	Ditto.
Cat. No. 125.	Size 71 mm. × 87 mm.	Ditto.
Cat. No. 126.	Size 82 mm. × 107 mm.	Ditto.

TYPE 6.

Cat. No. 127.	Size 96 mm. × 60 mm.	From the centre of Magazine AA.
Cat. No. 128.	Size 75 mm. × 55 mm.	Ditto.
Cat. No. 129.	Size 73 mm. × 50 mm.	Ditto.
Cat. No. 130.	Size 78 mm. × 55 mm.	Ditto.
Cat. No. 131.	Size 111 mm. × 60 mm.	Ditto.
Cat. No. 132.	Size 93 mm. × 54 mm.	Ditto.
Cat. No. 133.	Size 96 mm. × 56 mm.	Ditto.
Cat. No. 134.	Size 99 mm. × 50 mm.	Ditto.
Cat. No. 135.	Size 94 mm. × 63 mm.	Ditto.
Cat. No. 136.	Size 70 mm. × 54 mm.	Ditto.
Cat. No. 137.	Size 90 mm. × 62 mm.	Ditto.
Cat. No. 138.	Size 80 mm. × 67 mm.	From the centre of Magazine BB.

TYPE 7.

Cat. No. 139.	Size 80 mm. × 45 mm.	From the centre of Magazine AA.
Cat. No. 140.	Size 93 mm. × 43 mm.	Ditto.
Cat. No. 141.	Size 134 mm. × 70 mm.	Ditto.
Cat. No. 142.	Size 105 mm. × 50 mm.	From the pit.
Cat. No. 143.	Size 110 mm. × 80 mm.	Ditto.

TYPE 8.

Cat. No. 144.	Size 156 mm. × 35 mm.	From Magazine AA.
Cat. No. 145.	Size 113 mm. × 30 mm.	Ditto.
Cat. No. 146.	Size 122 mm. × 28 mm.	From Magazine CC.
Cat. No. 147.	Size 126 mm. × 25 mm.	Ditto.
Cat. No. 148.	Size 128 mm. × 30 mm.	Ditto.

TYPE 9.

Cat. No. 149.	Size 149 mm. × 28 mm.	From Magazine CC.
Cat. No. 150.	Size 155 mm. × 40 mm.	Ditto.
Cat. No. 151.	Size 166 mm. × 32 mm.	Ditto.

TYPE 10.

Cat. No. 152.	Size 82 mm. × 18 mm.	From the centre of Magazine AA.
Cat. No. 153.	Size 105 mm. × 15 mm.	Ditto.
Cat. No. 154.	Size 90 mm. × 13 mm.	Ditto.
Cat. No. 155.	Size 95 mm. × 13 mm.	Ditto.
Cat. No. 156.	Size 100 mm. × 19 mm.	Ditto.
Cat. No. 157.	Size 110 mm. × 14 mm.	Ditto.
Cat. No. 158.	Size 124 mm. × 19 mm.	Ditto.
Cat. No. 159.	Size 102 mm. × 19 mm.	Ditto.
Cat. No. 160.	Size 125 mm. × 17 mm.	Ditto.
Cat. No. 161.	Size 96 mm. × 16 mm.	Ditto.
Cat. No. 162.	Size 104 mm. × 16 mm.	Ditto.
Cat. No. 163.	Size 75 mm. × 12 mm.	Ditto.
Cat. No. 164.	Size 85 mm. × 21 mm.	Ditto.
Cat. No. 165.	Size 110 mm. × 16 mm.	Ditto.
Cat. No. 166.	Size 74 mm. × 21 mm.	Ditto.
Cat. No. 167.	Size 71 mm. × 19 mm.	Ditto.
Cat. No. 168.	Size 58 mm. × 14 mm.	Ditto.
Cat. No. 169.	Size 78 mm. × 22 mm.	Ditto.
Cat. No. 170.	Size 100 mm. × 20 mm.	Ditto.
Cat. No. 171.	Size 89 mm. × 18 mm.	Ditto.
Cat. No. 172.	Size 82 mm. × 16 mm.	Ditto.
Cat. No. 173.	Size 82 mm. × 13 mm.	Ditto.
Cat. No. 174.	Size 80 mm. × 18 mm.	Ditto.
Cat. No. 175.	Size 65 mm. × 16 mm.	Ditto.
Cat. No. 176.	Size 82 mm. × 15 mm.	Ditto.
Cat. No. 177.	Size 82 mm. × 18 mm.	Ditto.
Cat. No. 178.	Size 84 mm. × 19 mm.	Ditto.
Cat. No. 179.	Size 86 mm. × 15 mm.	Ditto.
Cat. No. 180.	Size 115 mm. × 15 mm.	Ditto.
Cat. No. 181.	Size 85 mm. × 16 mm.	Ditto.
Cat. No. 182.	Size 93 mm. × 27 mm.	Ditto.
Cat. No. 183.	Size 95 mm. × 18 mm.	Ditto.
Cat. No. 184.	Size 92 mm. × 16 mm.	Ditto.
Cat. No. 185.	Size 92 mm. × 19 mm.	Ditto.
Cat. No. 186.	Size 95 mm. × 16 mm.	Ditto.
Cat. No. 187.	Size 110 mm. × 20 mm.	Ditto.
Cat. No. 188.	Size 115 mm. × 20 mm.	Ditto.
Cat. No. 189.	Size 80 mm. × 18 mm.	Ditto.
Cat. No. 190.	Size 97 mm. × 22 mm.	Ditto.

Cat. No. 191.	Size 93 mm. × 16 mm.	From the centre of Magazine AA.
Cat. No. 192.	Size 101 mm. × 95 mm.	Ditto.
Cat. No. 193.	Size 106 mm. × 17 mm.	Ditto.
Cat. No. 194.	Size 137 mm. × 21 mm.	Ditto.
Cat. No. 195.	Size 92 mm. × 19 mm.	Ditto.
Cat. No. 196.	Size 92 mm. × 15 mm.	Ditto.
Cat. No. 197.	Size 55 mm. × 17 mm.	Ditto.
Cat. No. 198.	Size 100 mm. × 17 mm.	Ditto.
Cat. No. 199.	Size 85 mm. × 20 mm.	Ditto.
Cat. No. 200.	Size 95 mm. × 17 mm.	Ditto.
Cat. No. 201.	Size 103 mm. × 22 mm.	Ditto.
Cat. No. 202.	Size 104 mm. × 25 mm.	Ditto.
Cat. No. 203.	Size 80 mm. × 15 mm.	Ditto.
Cat. No. 204.	Size 85 mm. × 20 mm.	Ditto.
Cat. No. 205.	Size 107 mm. × 20 mm.	Ditto.
Cat. No. 206.	Size 106 mm. × 22 mm.	Ditto.
Cat. No. 207.	Size 115 mm. × 23 mm.	Ditto.
Cat. No. 208.	Size 78 mm. × 15 mm.	From the centre of Magazine BB.
Cat. No. 209.	Size 78 mm. × 20 mm.	Ditto.
Cat. No. 210.	Size 73 mm. × 20 mm.	Ditto.
Cat. No. 211.	Size 87 mm. × 15 mm.	Ditto.
Cat. No. 212.	Size 73 mm. × 16 mm.	Ditto.
Cat. No. 213.	Size 73 mm. × 20 mm.	Ditto.
Cat. No. 214.	Size 53 mm. × 16 mm.	Ditto.
Cat. No. 215.	Size 78 mm. × 18 mm.	Ditto.
Cat. No. 216.	Size 100 mm. × 16 mm.	Ditto.
Cat. No. 217.	Size 75 mm. × 17 mm.	Ditto.

TYPE 11.

Cat. No. 218. Size 68 mm. × 30 mm. Wrapped in papyrus in a leather bag in Magazine AA.

Cat. No. 219.	Size 70 mm. × 30 mm.	Ditto.
Cat. No. 220.	Size 74 mm. × 31 mm.	Ditto.
Cat. No. 221.	Size 77 mm. × 30 mm.	In a leather bag in Magazine AA.
Cat. No. 222.	Size 72 mm. × 28 mm.	Ditto.
Cat. No. 223.	Size 75 mm. × 29 mm.	Ditto.
Cat. No. 224.	Size 68 mm. × 27 mm.	Ditto.
Cat. No. 225.	Size 74 mm. × 26 mm.	Ditto.
Cat. No. 226.	Size 65 mm. × 27 mm.	From Magazine BB.

Cat. No. 227. Size 75 mm. \times 28 mm. From Magazine CC.
Cat. No. 228. Size 65 mm. \times 26 mm. Ditto.
Cat. No. 229. Size 70 mm. \times 27 mm. From pit.

TYPE 12.

Cat. No. 230. Size 65 mm. \times 28 mm. From a leather bag in Magazine AA.
Cat. No. 231. Size 72 mm. \times 28 mm. Ditto.
Cat. No. 232. Size 72 mm. \times 35 mm. Ditto.
Cat. No. 233. Size 70 mm. \times 28 mm. Ditto.
Cat. No. 234. Size 62 mm. \times 26 mm. Ditto.
Cat. No. 235. Size 66 mm. \times 28 mm. Ditto.
Cat. No. 236. Size 68 mm. \times 24 mm. Ditto.
Cat. No. 237. Size 67 mm. \times 29 mm. Ditto.
Cat. No. 238. Size 70 mm. \times 27 mm. Ditto.
Cat. No. 239. Size 65 mm. \times 28 mm. Ditto.
Cat. No. 240. Size 70 mm. \times 25 mm. Ditto.
Cat. No. 241. Size 75 mm. \times 30 mm. Ditto.
Cat. No. 242. Size 60 mm. \times 22 mm. Ditto.
Cat. No. 243. Size 72 mm. \times 28 mm. Ditto.
Cat. No. 244. Size 70 mm. \times 23 mm. Ditto.
Cat. No. 245. Size 66 mm. \times 26 mm. Ditto.
Cat. No. 246. Size 70 mm. \times 27 mm. Ditto.
Cat. No. 247. Size 55 mm. \times 25 mm. Ditto.
Cat. No. 248. Size 83 mm. \times 32 mm. Ditto.
Cat. No. 249. Size 67 mm. \times 28 mm. Ditto.
Cat. No. 250. Size 66 mm. \times 25 mm. Ditto.
Cat. No. 251. Size 70 mm. \times 23 mm. Ditto.
Cat. No. 252. Size 65 mm. \times 22 mm. Ditto.
Cat. No. 253. Size 67 mm. \times 23 mm. Ditto.
Cat. No. 254. Size 68 mm. \times 33 mm. Ditto.
Cat. No. 255. Size 68 mm. \times 25 mm. Ditto.
Cat. No. 256. Size 72 mm. \times 24 mm. Ditto.
Cat. No. 257. Size 67 mm. \times 28 mm. Ditto.
Cat. No. 258. Size 70 mm. \times 29 mm. From Magazine CC.
Cat. No. 259. Size 73 mm. \times 30 mm. Ditto.
Cat. No. 260. Size 70 mm. \times 30 mm. Ditto.
Cat. No. 261. Size 55 mm. \times 26 mm. From pit.
Cat. No. 262. Size 63 mm. \times 30 mm. Ditto.
Cat. No. 263. Size 70 mm. \times 28 mm. From Magazine BB.
Cat. No. 264. Size 65 mm. \times 31 mm. Ditto.

TYPE 13.

Cat. No. 265. Size 67 mm. \times 23 mm. Wrapped in papyrus in a leather bag in Magazine AA.

Cat. No. 266.	Size 65 mm. \times 20 mm.	Ditto.
Cat. No. 267.	Size 73 mm. \times 21 mm.	Ditto.
Cat. No. 268.	Size 77 mm. \times 25 mm.	Ditto.
Cat. No. 269.	Size 67 mm. \times 21 mm.	From a leather bag in Magazine AA.
Cat. No. 270.	Size 75 mm. \times 23 mm.	Ditto.
Cat. No. 271.	Size 70 mm. \times 22 mm.	Ditto.
Cat. No. 272.	Size 73 mm. \times 23 mm.	Ditto.
Cat. No. 273.	Size 68 mm. \times 24 mm.	Ditto.
Cat. No. 274.	Size 70 mm. \times 23 mm.	Ditto.
Cat. No. 275.	Size 70 mm. \times 20 mm.	Ditto.
Cat. No. 276.	Size 70 mm. \times 24 mm.	Ditto.
Cat. No. 277.	Size 65 mm. \times 20 mm.	Ditto.
Cat. No. 278.	Size 68 mm. \times 27 mm.	Ditto.
Cat. No. 279.	Size 69 mm. \times 20 mm.	Ditto.
Cat. No. 280.	Size 65 mm. \times 23 mm.	Ditto.
Cat. No. 281.	Size 65 mm. \times 25 mm.	Ditto.
Cat. No. 282.	Size 66 mm. \times 22 mm.	Ditto.
Cat. No. 283.	Size 64 mm. \times 23 mm.	Ditto.
Cat. No. 284.	Size 70 mm. \times 18 mm.	Ditto.
Cat. No. 285.	Size 68 mm. \times 18 mm.	Ditto.
Cat. No. 286.	Size 70 mm. \times 20 mm.	Ditto.
Cat. No. 287.	Size 60 mm. \times 19 mm.	Ditto.
Cat. No. 288.	Size 71 mm. \times 17 mm.	Ditto.
Cat. No. 289.	Size 65 mm. \times 24 mm.	Ditto.
Cat. No. 290.	Size 72 mm. \times 19 mm.	Ditto.
Cat. No. 291.	Size 70 mm. \times 20 mm.	Ditto.
Cat. No. 292.	Size 75 mm. \times 23 mm.	Ditto.
Cat. No. 293.	Size 71 mm. \times 21 mm.	Ditto.
Cat. No. 294.	Size 68 mm. \times 25 mm.	Ditto.
Cat. No. 295.	Size 70 mm. \times 24 mm.	Ditto.
Cat. No. 296.	Size 70 mm. \times 20 mm.	Ditto.
Cat. No. 297.	Size 72 mm. \times 24 mm.	Ditto.
Cat. No. 298.	Size 68 mm. \times 22 mm.	Ditto.
Cat. No. 299.	Size 64 mm. \times 20 mm.	From Magazine CC.
Cat. No. 300.	Size 68 mm. \times 23 mm.	Ditto.
Cat. No. 301.	Size 67 mm. \times 23 mm.	From pit.
Cat. No. 302.	Size 74 mm. \times 23 mm.	From Magazine BB.
Cat. No. 303.	Size 70 mm. \times 22 mm.	Ditto.
Cat. No. 304.	Size 67 mm. \times 23 mm.	Ditto.
Cat. No. 305.	Size 74 mm. \times 24 mm.	Ditto.

Chapter IV.

THE DISKS

The purpose of these disks of stone, copper, wood, horn and ivory is at present unknown, but the evidence yielded in their discovery suggests some form of game, possibly they were spinning tops. The circumstances of their finding is as follows :—

After the removal of a bundle of arrows (Cat. Nos. 433 and 434) lying near the north wall of Magazine Z (Pl. 8) we uncovered a lidless box measuring 54 cms. \times 15 cms. (Cat. No. 433) in which were placed the disks and a number of small wooden sticks, some of which were in position through the holes in the centres of the disks. The greater part of the box had been eaten by insects, but as it had had an inlaid decoration of ivory its outline and size was fortunately easily ascertainable (Plate 8a.). That it had no lid is proved by the fact that the arrows, originally wrapped in leather, had been pressed down by the weight of debris on to the box breaking the sides so that we found them lying in direct contact with the disks (Plate 8d). Fragments of the leather in which the arrows were wrapped were found adhering to the top layer of disks, and minute examination revealed no trace of wood between them. It is thus certain that the box had no lid when the group was placed in the magazine.

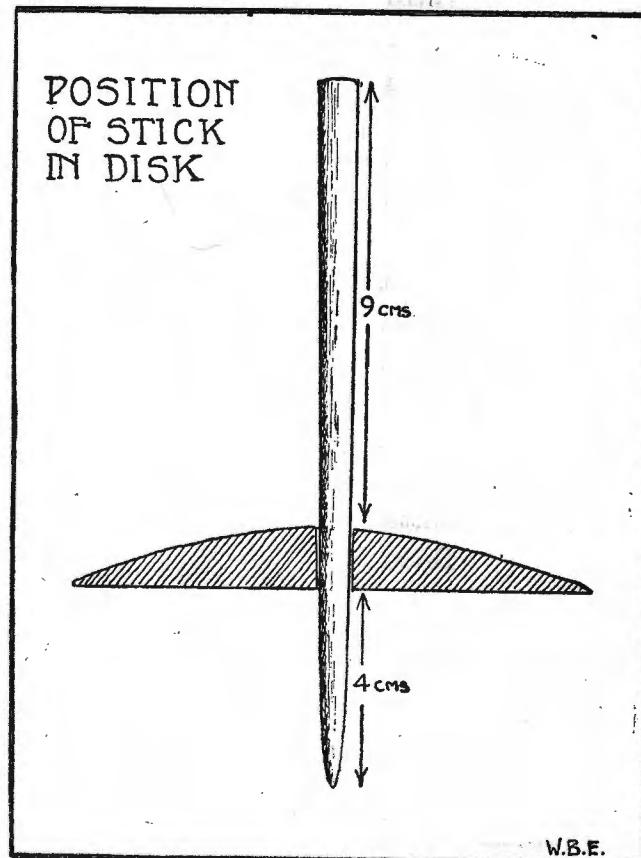


FIG. 6

That the box was never intended to have a lid is proved by its design, for the inlaid decoration of ivory continued over the top of the rounded edges. Taking these facts into consideration it is possible to see in this lidless box something in the nature of a gaming board. Fig. 6 shows the position of the wooden sticks as found *in situ*, and it will be noted that the major part of the stick stands above the top of the disk. Experiment has proved that if this is held between the palms of the hands and turned quickly it will spin for a considerable period (Plate 12a.). They could thus be spun on the floor of the box (or gaming board) the sides of which were high enough to prevent them falling out. It is within the realms of possibility that the floor of the box was marked out in some way for the purpose of the game, but of this we have no evidence as it was quite destroyed.

by insects. Further support for the theory of a game in connection with these objects is given on disks Cat. Nos. 335, 337 and 348, which have faintly painted on them in red what appear to be numerical signs. (See Fig. 7).



FIG. 7

The disks vary much in thickness and size, some being flat on both sides, others flat on one side and convex on the other, others convex o'convex, and convex o'concave.

Cat. No. 306. Schist. With decorated border of white limestone rings set in red paste. The disk is convex on the decorated side and flat on the other. Size: Diameter 130 mm. Hole 6 mm. Thickness 7 mm. (Plate 12d).

Cat. No. 307. Black steatite. Decorated with a hunting scene depicting two dogs, one of which is chasing a gazelle, and the other throwing a gazelle which it holds by the throat. One of the dogs is carved in a piece with the body of the disk, as are also the black horns and hoofs of the gazelles. The bodies of the gazelles and the second dog have been inlaid with alabaster stained pink. All the figures are in relief. The disk is bordered with an incised criss-cross pattern. Convex on the decorated side and flat on the other. Size: Diameter 87 mm. Hole 7 mm. Thickness 7 mm. (Frontispiece and Plate 12 b).

Cat. No. 308. Schist. Decorated with a diamond pattern arranged in three concentric circles. The diamonds are of ivory and have been set in the first and third circles with triangular pieces of red stone, and in the second with triangular pieces of ebony. The disk is convex on the decorated side and flat on the other. Size: Diameter 98 mm. Hole 7 mm. Thickness 8 mm. (Plate 12 e).

Cat. No. 309. Limestone. With inlaid border of diamond shaped pieces of alabaster set in black paste. On each side of the hole are two doves with outstretched wings, facing each other with heads touching the edge of the hole. They have been carved separately out of pink limestone and their eyes are inlaid with ivory. They were attached with an adhesive to the disk. The decorated side is flat with bevelled edges. Size: Diameter 97 mm. Hole 7 mm. Thickness 7 mm. (Plate 12 c).

Cat. No. 310. Schist. With a design of two storks in a net. The whole design has been inlaid with white alabaster and a brownish paste. The decorated side is convex

and the other side flat. Size: Diameter 89 mm. Hole 7mm. Thickness 7 mm. (Plate 12c).

Cat. No. 311. Schist. Convex on one side and flat on the other. Size: Diameter 144 mm. Hole 7 mm. Thickness 5 mm.

Cat. No. 312. Crystal. Convex on one side and flat on the other. Size: Diameter 85 mm. Hole 5 mm. Thickness 7 mm.

Cat. No. 313. Black steatite. Convex on one side and flat on the other. Size: Diameter 126 mm. Hole 10 mm. Thickness 9 mm.

Cat. No. 314. Alabaster. Convex on one side and flat on the other. Size: Diameter 115 mm. Hole 9 mm. Thickness 8 mm.

Cat. No. 315. Blue-green volcanic ash. Convex on one side and flat on the other. Size: Diameter 110 mm. Hole 7 mm. Thickness 13 mm.

Cat. No. 316. Limestone. Both sides are convex but the lower one only slightly. Size: Diameter 132 mm. Hole 9 mm. Thickness 12 mm.

Cat. No. 317. Dolomite. Convex on one side and flat on the other. Size: Diameter 95 mm. Hole 7 mm. Thickness 11 mm.

Cat. No. 318. Dolomite. Convex on one side and flat on the other. Size: Diameter 115 mm. Hole 8 mm. Thickness 10 mm.

Cat. No. 319. Dolomite. Convex on one side and flat on the other. Size: Diameter 90 mm. Hole 8 mm. Thickness 10 mm.

Cat. No. 320. Dolomite. Convex on one side and flat on the other. Size: Diameter 90 mm. Hole 8 mm. Thickness 9 mm.

Cat. No. 321. Pink and white alabaster. The upper side of the disk has been cut so that between two rings of pink alabaster there is one of white, and on this white ring is a sign, in relief, . The disk is flat on both sides. Size: Diameter 105 mm. Hole 8 mm. Thickness 8 mm.

Cat. No. 322. Alabaster. Flat on both sides. Size: Diameter 134 mm. Hole 9 mm. Thickness 8 mm.

Cat. No. 323. Copper. Convex on one side and flat on the other. Size: Diameter 95 mm. Hole 4 mm. Thickness 4 mm.

Cat. No. 324. Copper. Slightly convex on one side and flat on the other. Size: Diameter 130 mm. Hole 6 mm. Thickness 6 mm.

Cat. No. 325. Ivory. Convex on one side and flat on the other. Size: Diameter 98 mm. Hole 6 mm. Thickness 10 mm.

Cat. No. 326. Crystal. Convex on one side and flat on the other. Size: Diameter 82 mm. Hole 6 mm. Thickness 10 mm.

Cat. No. 327. Greenish schist. Convex on one side and flat on the other. Size: Diameter 100 mm. Hole 6 mm. Thickness 8 mm.

Cat. No. 328. Limestone. Convex o'convex. Size: Diameter 104 mm. Hole 6 mm. Thickness 10 mm.

Cat. No. 329. Dolomite. Convex on one side and flat on the other. Size: Diameter 75 mm. Hole 5 mm. Thickness 10 mm.

Cat. No. 330. Dolomite. Convex on one side and very slightly convex on the other. Size. Diameter 90 mm. Hole 6 mm. Thickness 8 mm.

Cat. No. 331. Alabaster. Flat on both sides. Size: Diameter 135 mm. Hole 8 mm. Thickness 8 mm.

Cat. No. 332. Greenish schist. Convex on one side and flat on the other. Size: Diameter 106 mm. Hole 6 mm. Thickness 10 mm.

Cat. No. 333. Volcanic ash. Convex on one side and flat on the other. Size: Diameter 92 mm. Hole 5 mm. Thickness 11 mm.

Cat. No. 334. Schist. Very slightly convex on one side and flat on the other. Size: Diameter 105 mm. Hole 8 mm. Thickness 6 mm.

Cat. No. 335. Schist. Convex o-convex, one side very slightly. And on this side is a sign painted in red. (Fig. 7). Size: Diameter 106 mm. Hole 6 mm. Thickness 8 mm.

Cat. No. 336. Alabaster. Pink on one side and white on the other. Flat on both sides. Size: Diameter 122 m. Hole 8 mm. Thickness 6 mm.

Cat. No. 337. Schist. Convex on one side and flat on the other. On the flat side is painted a sign in red. (Fig. 7). Size: Diameter 109 mm. Hole 8 mm. Thickness 10 mm.

Cat. No. 338. Copper. Flat on both sides. Size: Diameter 99 mm. Hole 6 mm. Thickness 4 mm.

Cat. No. 339. Schist. Convex on one side and flat on the other. Size: Diameter 102 mm. Hole 8 mm. Thickness 12 mm.

Cat. No. 340. Schist. Convex on one side and flat on the other. Size: Diameter 94 mm. Hole 6 mm. Thickness 8 mm.

Cat. No. 341. Copper. Slightly convex on one side and flat on the other. Size: Diameter 88 mm. Hole 6 mm. Thickness 4 mm.

Cat. No. 342. Wood. Convex on one side and flat on the other. The convex side is inlaid with tiny paste circles arranged in concentric circles. Size: Diameter 85 mm. Hole 5 mm. Thickness 6 mm.

Cat. No. 343. Yellow limestone. Convex on one side and flat on the other. Size: Diameter 118 mm. Hole 7 mm. Thickness 9 mm.

Cat. No. 344. Limestone. Convex on one side and flat on the other. Size : Diameter 103 mm.
Hole 8 mm. Thickness 8 mm.

Cat. No. 345. Alabaster. Convex on one side and flat on the other. Size : Diameter 313 mm.
Hole 8 mm. Thickness 8 mm.

Cat. No. 346. Yellow limestone. Convex o'convex, only very slightly on one side. Size :
Diameter 98 mm. Hole 6 mm. Thickness 6 mm.

Cat. No. 347. Dolomite. Convex o'concave. Size : Diameter 103 mm. Hole 7 mm. Thickness
10 mm.

Cat. No. 348. Limestone. Convex on one side and flat on the other. On the flat side are
painted signs in red. (Fig 7). Size : Diameter 130 mm. Hole 9 mm. Thickness
9 mm.

Cat. No. 349. Limestone. Convex on one side and flat on the other. Size : Diameter 90 mm.
Hole 5 mm. Thickness 10 mm.

Cat. No. 350. Horn (fragment only). Approximate Diameter 90 mm. Approximate thick-
ness 5 mm.

Chapter V.

WOODEN TOOLS, ETC.

Cat. No. 351. Adze. With a faceted handle. The facets terminate in elaborately carved grooves which run over the top of the head. Marks of the cords for securing the blade are apparent. These blades were either of copper or flint, but no trace of them was found, and it is evident that the object was buried without them. Length 71 cms. Found near the west wall of Magazine Z. (Plates 8a and 16).

Cat. No. 352. Adze handle. Of a similar type to Cat. No. 341. Length 78 cms. Found near the west wall of Magazine Z. (Plate 16).

Cat. No. 353. Adze handle. Of a similar type to flat. No. 341. Length 73 cms. Found in the south-east corner of magazine Z. (Plate 16).

Cat. No. 354. Adze handle. Of a similar type to flat. No. 341. Length 73 cms. Found in the south-east corner of Magazine Z. (Plate 16).

Cat. No. 355. Object of unknown use. In the form of a disk convex on one side and flat on the other. On the flat side there is an oblong hole in which is socketted a piece of wood, and on the convex side there is a small hole from which protrudes a small wooden spike. Diameter 90 mm. Thickness 38 mm. Found in Magazine BB.

Cat. No. 356. Sickle. With a cutting edge formed of small flints set in a groove in the wood. The handle curves back and thus forms a guard for the hand. This guard is decorated with elaborately carved grooves. Length 54 cms. From near the south wall of Magazine Z. (Plate 15a).

Cat. No. 357. Sickle similar to Cat. No. 346 with which it was found. Length 52 cms. (Plate 15b.).

Cat. No. 358. Sickle similar to Cat. No. 346. The handle has been partly destroyed by the white ants. Length 51 cms. From near the south wall in Magazine Z.

Cat. No. 359. Sickle similar to Cat. No. 346. The handle has been broken in ancient times and repaired by four V-shaped dove-tails. Length 45 cms. From near the south wall in Magazine Z.

Cat. No. 360. Sickle. Similar to Cat. No. 346. The upper part of the blade has been destroyed by the white ants. Found in the south-east corner of Magazine Z.

Cat. No. 361. Fragments of Sickle. The handle differs from the others in that the grooves are arranged in a panel. Another interesting feature is that a flaw in the wood has been carefully filled with hard plaster. Found in the south-east corner of Magazine Z.

Cat. No. 362-392. Thirty sickles. The wooden parts of which were almost entirely destroyed by the white ants. Only the flint blades are remaining.

Cat. No. 393. Sickle with plain handle. Inscribed on the wooden blade with the names of Semti and Hemaka. Length 36 cms. Found in the centre of magazine Z. (Plate 15c).

Cat. No. 394. Staff. Length 142 cms. Diameter 15 mm. Found on the floor of Magazine Z.

Cat. No. 395. Staff. Length 110 cms. Diameter 30 mm. Found in a leather bag Cat. No. 435 which stood in an upright position against the south wall of Magazine Z.

Cat. No. 396. Staff. Length 118 cms. Diameter 25 mm. Found with Cat. No. 385.

Cat. No. 397-410. Fragments of fourteen staffs. The ends in every case came to a blunt point made by five even cuts. Their average thickness was 15 mm. Found in a leather bag Cat. No. 436 in Magazine Z.

Chapter VI.

LABELS

Cat. No. 411. Ebony label dated to the reign of Zer. (Fig 8). Measuring 95×85×4 mm. Inscribed on one side, the figures having been painted with green and red pigment. (Plate 18a.). A fragment of cord was found threaded through the hole in the top right hand corner. It was found near a leather bag, to which it had most probably once been attached, in Magazine Z.



FIG. 8

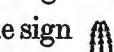
From the position of the hieroglyphic signs it would seem that the inscription reads from right to left. Assuming this to be correct the first group on the top register consists of two seated human figures, both bearded. The one on the right is apparently a captive with his arms tied behind his back, a conventional posture for a prisoner. (See figures on the mace head of Narmer and on the ivory cylinders from Hierakonpolis ⁽¹⁾.) The second figures seated facing him appears to be stabbing him in the breast with a knife which he holds in one hand, while with the other he holds a vase, presumably in which to catch the blood. This group is identical with one on a fragment of a label from Abydos, dated to the reign of Aha ⁽²⁾. Above these figures is a group of

⁽¹⁾ QUIBELL. *Hierakonpolis*. Part I. Pls. XV and XXVI B.

⁽²⁾ PETRIE. *Royal Tombs of the First Dynasty*. Vol. II, Pl. III, 6.

hieroglyphic signs,  *rs mh ssp*, which may perhaps be translated as "receiving (or taking) from the south and north." A second fragment from Abydos which Petrie considers is a part of the above mentioned piece, contains the same group of signs⁽¹⁾. He suggests that the group means "receiving the captives of the south and north⁽²⁾"; but Griffith suggests that it means "receiving the princes of the north and south" or "receiving the kingdom of the north and south⁽³⁾."

The next group consists of the standing figure of a bearded man holding in a vertical position what appears to be a spear; in front of him is a man, also bearded, carrying a large bird on the crook of his arm or shoulder. *oirlaw ciuognides*

The next figure is a bearded man carrying what, if we allow for the crudeness of the cutting, is undoubtedly a "nar" fish. (Compare with the representation of this fish in the "serekh" of Narmer on a sealing from Abydos⁽⁴⁾.) The identity of the "nar" fish is uncertain. Budge considered it to be a cuttlefish⁽⁵⁾, while Griffith was of the opinion that it represents the catfish⁽⁶⁾, which is confirmed by its frequent presentation in fishing scenes, etc., in Old Kingdom tombs as a denizen of the Nile⁽⁷⁾. Above the figure holding the fish is the sign  in which we may see  *ms*, birth; but the absence of the projections at the top of the sign makes this identification uncertain. The apparent incompleteness of the sign is its usual form as it appears again on the middle register and occurs frequently on labels from Abydos⁽⁸⁾. Petrie definitely accepts this identification⁽⁹⁾, and the evidence is in its favour.

The next group is of considerable interest and is, as far as the writer knows, unique on these labels. It represents a bearded man carrying in a vertical position a mummiform figure, which in the absence of a beard is presumably that of a female. As far as we know the extended mummy did not exist at this period, nevertheless there can be little doubt that this is what the figure represents. The seated mummiform figure of a god is shown on the labels of Udimu, found by Petrie and Amélineau at Abydos⁽¹⁰⁾, but we can hardly compare these with the figure on this label.

In front of the man with the mummiform figure is another bearded figure carrying a standard, the emblem on the top of which it is impossible to identify.

⁽¹⁾ *Op. cit.* Vol. II. Pl. III. 4.

⁽²⁾ *Op. cit.* Vol. II. p. 20.

⁽³⁾ PETRIE. *Op. cit.* Vol. II. p. 49.

⁽⁴⁾ PETRIE. *Op. cit.* Vol. II. Pl. XIII. No. 9.

⁽⁵⁾ BUDGE. *Dict.* p. CXX.

⁽⁶⁾ PETRIE. *Op. cit.* Vol. I. p. 37.

⁽⁷⁾ FIRTH AND GUNN. *Teti Pyramid Cemeteries.* Pl. 53.

⁽⁸⁾ PETRIE. *Op. cit.* Vol. II. Pl. 111.

⁽⁹⁾ *Op. cit.* Vol. II. p. 20.

⁽¹⁰⁾ PETRIE. *Op. cit.* Vol. I. Pl. XV. AMÉLINEAU. *Les nouvelles fouilles d'Abydos.* Vol. III. Pl. XXXVII. 3.

Perhaps we may see in it a nome emblem. The next and last group on the top register is the "serekh" of King Zer.

The beginning of the middle register has unfortunately been destroyed by insects and the signs in the top corner obliterated. Half the register is taken up by two figures seated on low beds or seats. These are of particular interest when we compare them with a similar figure on the Narmer mace head from Hierakonpolis (1) (Fig. 9), and with the reliefs of the Sed festival of King

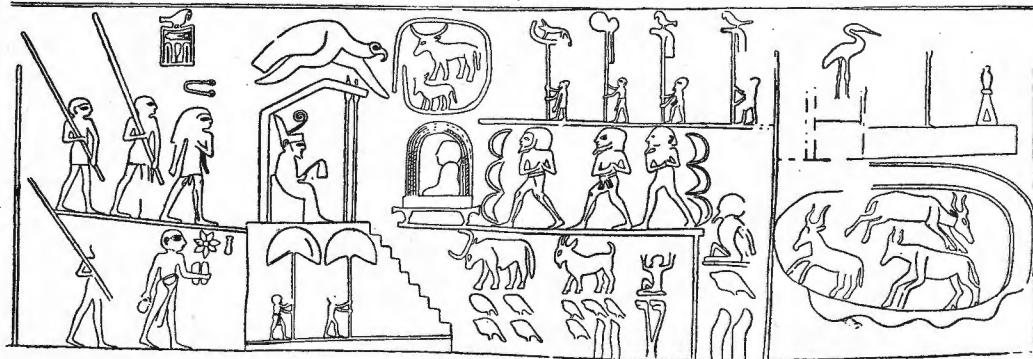


FIG. 9

Niuserré from his temple at Abu-Gurab (1) (Fig. 10). They also bear a remarkable resemblance to the "tecanu" figures in the Theban tombs of the

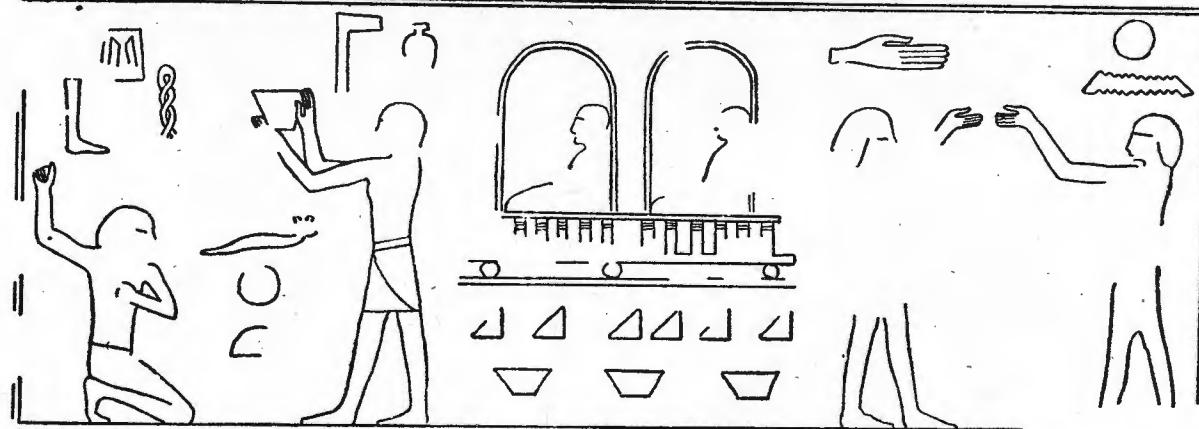


FIG. 10

New Empire. The figures appear to be either mummiform or wrapped in skins as in the "tecanu" ceremony, and as they are beardless and have long hair they are presumably females. Apparently each figure has a lock of hair hanging down over the forehead and in front of the face. Owing to the damage done by insects little can be made of the hieroglyphic signs above these figures. Three small triangular signs are apparent above the first figure and above the second we may perhaps recognise the signs $\text{---} \text{---}$ *nb nb*, which Petrie translates as "the double lord" (2). Before this group is an unintelligible sign which

(1) QUIBELL. *Op. cit.* Vol. I. Pl. XXVI. B.

(2) VON BISSING. *Das Re-Heiligtum*, Band II, Blatt 18.

(3) *Op. cit.* Vol. II. p. 19.

is repeated further on, and below is another partly obliterated sign directly above the second figure.

In front of the seated figures is another figure of a bearded man who appears to be either juggling with disks, loops or rings, or else catching them from a bird which holds one in its claw. On top of a vertical line above him is the figure of another bird, but this probably forms part of the group of signs which includes the *nb nb* combination. The next figure represents a bearded man carrying a large box and in front of him is another figure, also bearded, carrying a standard surmounted with the figure of a bull and a feather (?). Below the standard is the sign .

The third register contains a group of signs, variations of which appear on many of these labels; they probably hold the clue as to the use of these objects. The beginning of this register is destroyed, but it is possible to surmise from the size of the label that there was sufficient space for the sign  *ha* which almost invariably prefixes this formula on other labels (1). We then begin with the group    *yt ys.t Hr.w*, which Griffith translates "who took the throne of Horus" (2); and then the sign  *ht* with the number six hundred below it. After this come the signs    *sw yn* (?) (compare with a similar group on the ivory label of Zer from Abydos) (3). The inscription ends with the sign  with two strokes below it. It is difficult to see in this sign the ordinary  and when we compare it with the corresponding signs on the labels of Aha from Nagadeh (4) and Abydos (5), it is evident that the sign has a definite form consisting of a horizontal line at the top connected with a triangular or semi-circular object by three or four vertical lines. A possibility is the sign  , in which Budge sees the ideograph of an oil or wine-press (6).

Newberry considers that the texts on the labels from Abydos and Nagadeh refer to various sorts of oils and that they were dated, like the events on the Palermo Stone, by the happenings of a single year of the king's reign (7). Following Newberry's theory we would translate the third register of this label as follows:                           <img alt

the identification of  with   , and   with   , which is the same as the later  .

The weakness of this identification lies in the uncertainty with regard to the bird above the  which Griffith considered  ⁽¹⁾ and Quibell  .

The repetition of this group of signs on Dyn. 1 labels points with comparative certainty to their representing some commodity which, as Newberre suggests, is dated by events during one year of the king's reign. On this label these events are recorded on the first two registers. The scenes undoubtedly represent a festival of some description and a comparison with those on the Narmer mace head (see Fig. 9) renders it almost certain that they are records of a similar event. The presence of the standard bearers and the two seated figures in the second register bear a marked resemblance to the scenes depicted on the Niuserre reliefs (see Fig. 10). I venture to suggest that we have here a record of events from a *Heb-Sed* festival.

Cat. No. 412. Small ivory label. Measuring $34 \times 27 \times 2$ mm. Inscribed with the name Hemaka. The group of signs following are indecipherable, but one might venture to suggest *prt Ta-mhw*. "Festival of the Delta" or "Seed of the Delta." I can offer no suggestion with regard to the identity of the sign below this group. Holes have been cut in three corners of the label. Found in S.E. corner of Magazine Z. (Plates 17 and 18).

Cat. No. 413. Small ivory label. Measuring $32 \times 26 \times 2$ mm. Inscribed with similar text as that on Cat. No. 402, only in this example the sign  has been left out of the name of Hemaka. (Plates 17 and 18).

Cat. No. 414. Wooden label with small hole in one corner. Uninscribed. Measuring 93×52 mm. Found in leather bag (Cat. No. 434) in Magazine AA.

Cat. No. 415. Wooden label. Fragment only. With rounded top and hole in centre top. Measuring 117×45 mm. From a leather bag (Cat. No 434) in Magazine AA.

Cat. No. 416. Wooden label. Uninscribed. Measuring 98×60 mm. From a leather bag in Magazine AA.

Cat. No. 417. Wooden label. Uninscribed. Measuring 90×58 mm. From a leather bag in Magazine AA.

Cat. No. 418. Fragments of wooden label. Uninscribed. Measuring 90×70 mm. With hole in one corner. From a leather bag in Magazine AA.

⁽¹⁾ PETRIE, *Op. cit.* Vol. I, p. 41.

Chapter VII.

MISCELLANEOUS OBJECTS

Cat. No. 419. Eight copper piercers. They are round in section and taper to a point. Size 205 mm. in length. From the leather bag in Magazine AA.

Cat. No. 420. Rectangular schist palette. Size 100 mm. × 52 mm. From Room 1.

Cat. No. 421. Fragment of an ivory wand. The end is in the form of a hand with a pointing finger. From Room 1. (Plate 19e).

Cat. No. 422. Small spoon of schist. From Room 1. (Plate 19c).

Cat. No. 423. Fragments of what was probably a schist bowl in the form of a leaf. (Plate 19). From the pit.

Cat. No. 424. Three alabaster gaming pieces. Circular, with one flat side and one convex. Size 45 mm. diameter. Thickness 25 mm. From the pit. (Plate 19e).

Cat. No. 425. Set of gaming pieces of horn. Average size 7 cms. From the leather bag in Magazine AA.

Cat. No. 426. Set of gaming pieces comprising one large ivory piece, five small ivory pieces, and five wooden pieces. Average height of the small pieces 45 mm. and the large piece 70 mm. From the leather bag in Magazine AA (Plate 19c).

Cat. No. 427. Animal foot bone. The end has been filed with cross grooves. Size 58 mm. From Magazine Z.

Cat. No. 428. Six small wooden objects of unknown use. Found in a row on the floor of Magazine BB. The bottom of the wide ends bear traces of decoration in the form of concentric circles. Size 60 mm. length.

Cat. No. 429. Pieces of ivory, possibly from a box. Decorated with engraved patterns. From Magazine X.

Cat. No. 430. Fragments of what was probably a gaming board of ivory. The board was supported on four bulls legs. (Plate 19).

Cat. No. 431. Fragment of limestone bearing a painting in black ink of a bull and a monkey. Size 89 cm. 68 cms. From Magazine Z. (Plate 19d).

Chapter VIII.

BAGS AND BOXES

Cat. No. 432. Circular wooden box with flat lid. Measuring 19 cms. in diameter and 10 cms. in height. Inlaid with different woods. A small flattened roll of uninscribed papyrus was the sole contents. (Plate 23a). Found in Magazine Z.

Cat. No. 433. Large wooden box. Measuring 54 cms. square and 15 cms. deep approximately. Very much damaged by white ants. It was inlaid with different woods and ivory. It contained the disks. For details of construction see Fig. 11. Found in Magazine Z.

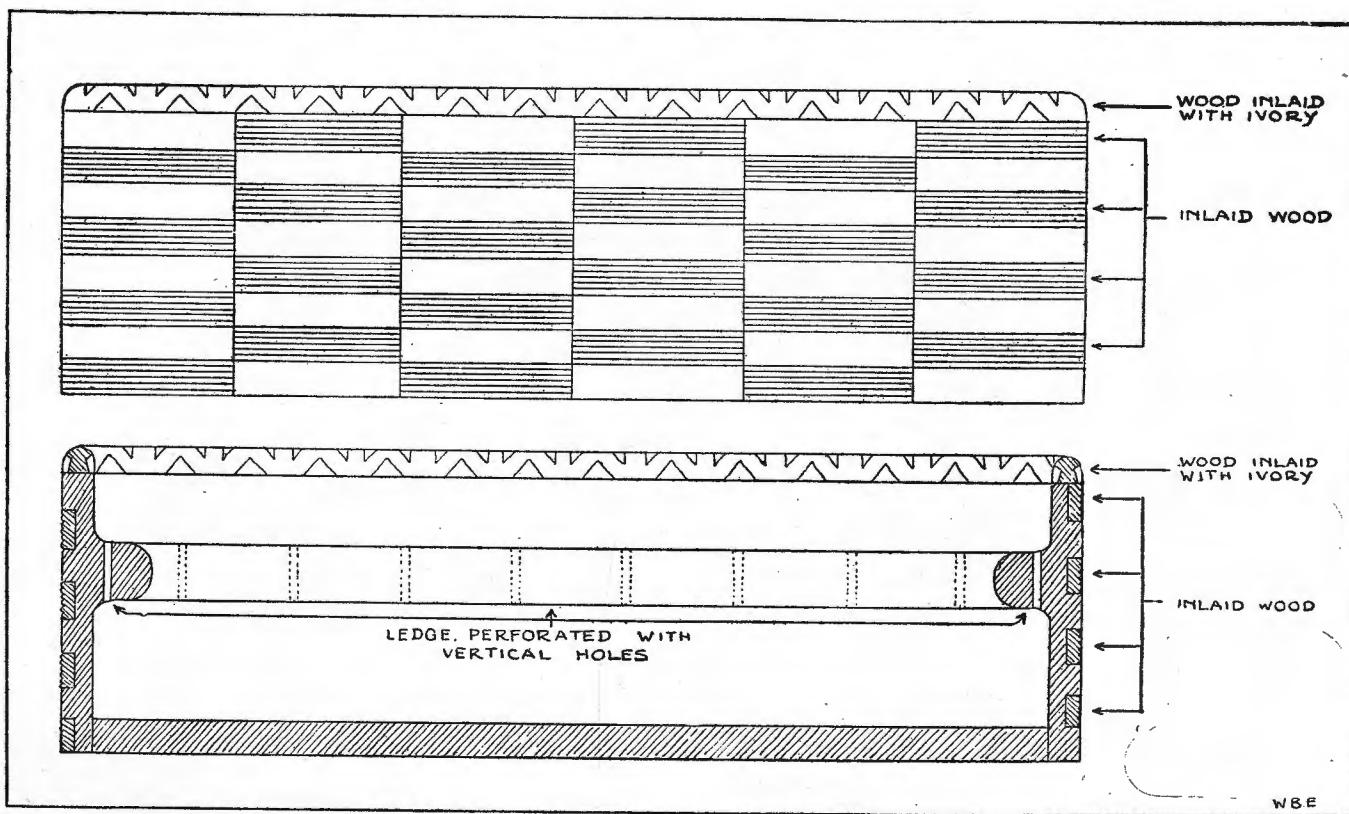


FIG. 11

Cat. No. 434. Large bag of soft leather. The mouth was closed with rope on which was a mud sealing bearing an impression with the name of Udimu. It contained numerous objects such as flint implements, gaming pieces, copper piercers and wooden labels. Size approximately 70×40 cms. Found in Magazine AA.

Cat. No. 435. Large cylindrical leather bag with wooden fittings. Approximately one metre in height and 15 cms. in diameter. It contained wooden staffs. For details of construction see Fig. 12. Found in Magazine Z.

Cat. No. 436. Ditto.

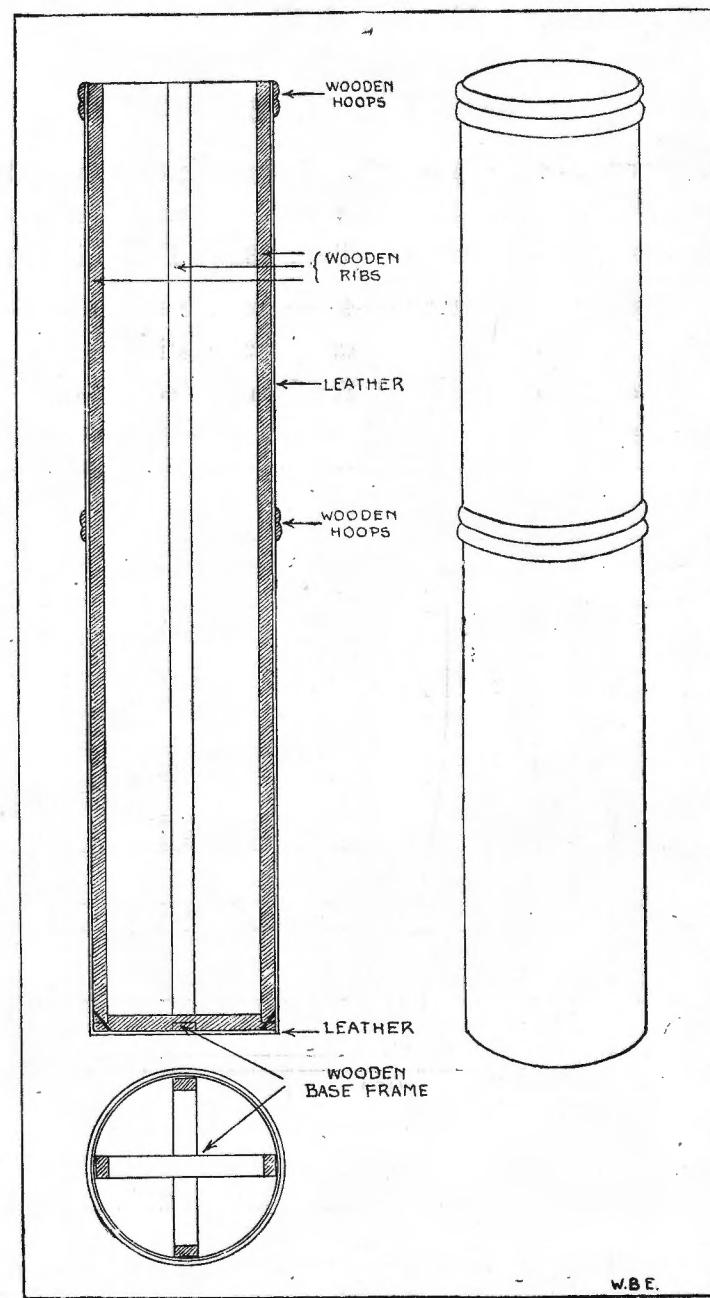


FIG. 12

Chapter IX.

TEXTILES

Cat. No. 437. Fragments of matting which lay on floor of Magazine Z.

Mr. Lucas reports :

“ Flat plaits (7 mm. wide) bound together with thinner and different material from 1 to 2 mm. wide, probably matting. The material of the plaits is not date palm fibre, but almost certainly a grass not identified. The thinner binding material is flax string.”

Cat. No. 438. Fragments of woven fabric which lay inside the remains of a wooden box in Magazine Z.

Mr. Lucas reports :

“ Coarse irregular weave.

Count : approximately 13×36 per inch.

Fibre : flax.”

Cat. No. 439. Large coil of rope from floor of Magazine AA. (Plates 9 and 23).

Mr. Lucas reports :

“ Circumference : 3.0 cm. to 3.2 cm. (Repeat : 3.2 : 3.2).

Strands : 3.

Yarns per strand : approximately 190.

Fibres per yarn : not counted.

Fibre : flax.

Colour : almost white.”

Cat. No. 440. Fragments of rope.

(a) Found in Magazine AA attached to mouth of leather bag. (Cat. No. 434).

Mr. Lucas reports :

“ Circumference : 1 cm.

Strands : 2.

Yarns per strand : 7.

Fibres per yarn : not counted.

Fibre : flax.

Colour : almost white.”

(b) Found in the debris of Magazine Z.

Mr. Lucas reports :

“ Circumference : 1.3 to 1.4 cm.

Strands : 2.

Yarns per strand : varies 20 to 30.

Fibres per yarn : not counted.

Fibre : flax.

Colour : almost white.”

(c) Found in the debris in Magazine Z.

Mr. Lucas reports :

“Circumference : 1·3 cm.

Strands : 3.

Yarn per strand : about 15.

Fibres per yarn : not counted.

Fibre : flax.

Colour : very light brown.”

(d) Found in the debris of Magazine Z.

Mr. Lucas reports :

“Circumference : 3·2 cm.

Strands : 3.

Yarns per strand : too fragile to permit counting.

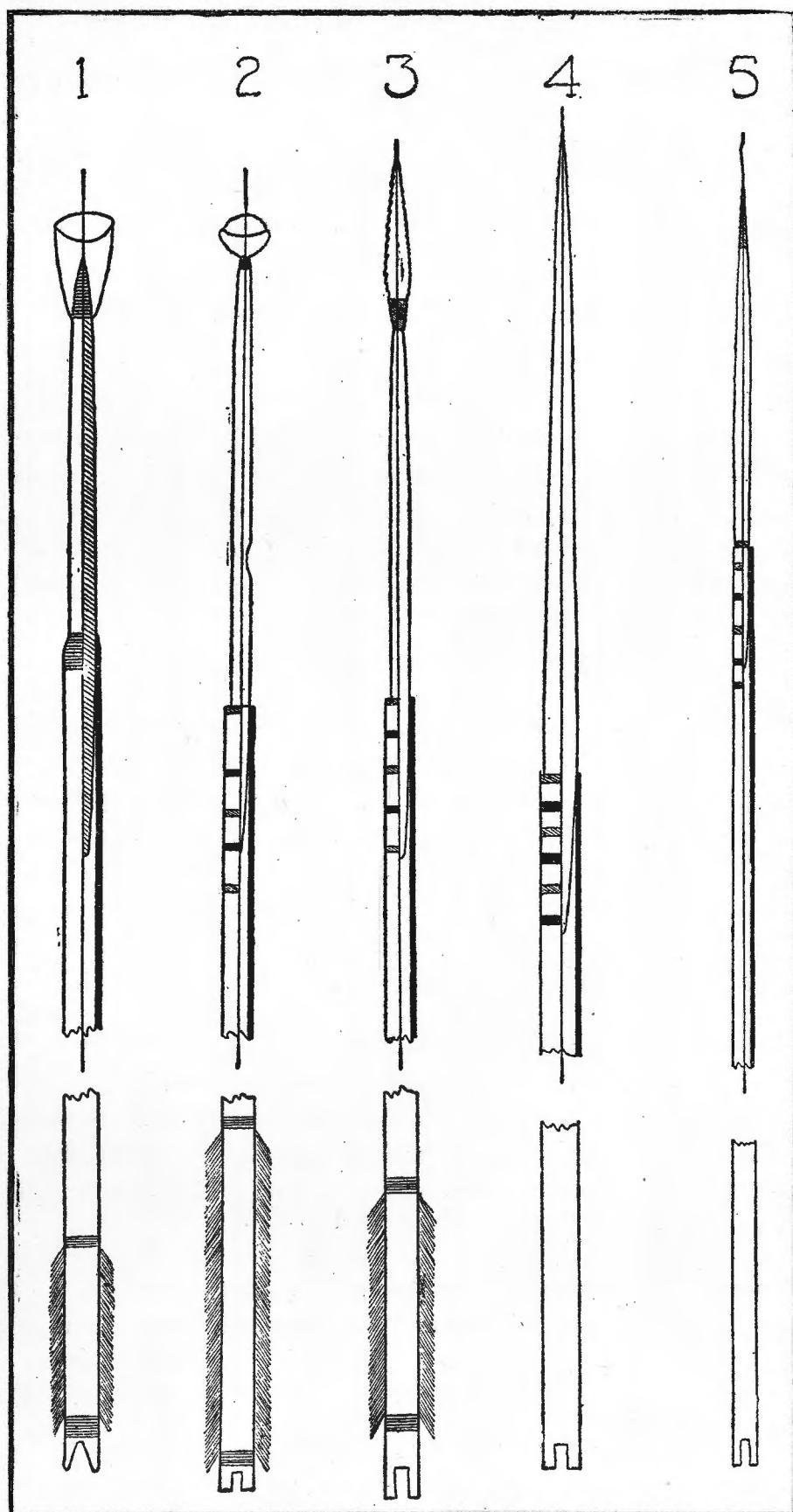
Fibres per yarn : not counted.

Fibre : not flax, not date palm fibre, almost certainly a grass not identified.

Colour : dark brown.”

Chapter X.
ARROWS, ETC.

Five distinct types of arrows were found and may be listed as follows (Fig. 13):



Type 1. An arrow with an average total length of 50 cms. from the tip to the notch. The head is formed by an agate lunate cemented to the top of a short ebony stick. Prior to the attachment of the lunate the top of the stick has been bound with thread to prevent any expansion which would crack the cement and thus loosen the lunate. The ebony stick, which has an average length of 13 cms., is socketed into the shaft of the arrow, the shaft being formed by a hollow reed. It is held fast by the fact that it has been cut with a slightly expanding centre and the orifice of the reed shaft has been tightly bound with thread. The bottom of the shaft has two feathers attached on opposite sides with both gum and thread, and the notch has been formed by a V-shaped cut just below one of the natural joints of the reed to prevent any possibility of the string splitting the shaft.

Arrows of this type were found in the tomb of Tutankhamen and are of similar construction.

Type 2. An arrow with an average total length of 51 cms. from the tip to the notch. The head is formed by an agate lunate attached with cement to the top of an ivory stick which has an average length of 31 cms. This stick, which is socketed into a reed shaft, is decorated with two bands of red paint, one at the top just below the cement and the other above the orifice of the reed shaft. The shaft is decorated at the top with alternate blue and red bands spaced at intervals of about 8 mm. Two feathers are attached to the bottom of the shaft with gum and thread, and a square cut notch is cut below one of the natural joints.

Type 3. An arrow with an average total length of 52 cms. from the tip to the notch. The barbed head is formed by the jaw of a small fish cemented to an ivory stick. The point of the barbed fish jaw is painted red, possibly in imitation of blood or poison, and the cement joint has also been painted red. The ivory stick, which has an average length of 12 cms., is socketed into a reed shaft the top of which is decorated with alternate blue and red bands spaced at intervals of about 8 mms. Two feathers are attached with gum and thread to the bottom of the shaft and a square shaped notch is cut below a natural joint.

Type 4. An arrow with an average total length of 55 cms. from the tip to the notch. A stick of ivory filed to a tapering point is socketed in a reed shaft. The average length of the ivory head is 19 cms. The top of the shaft is decorated with alternate red and blue bands spaced at intervals of about 5 mm. No feathers were attached to arrows of this type. The notch is square cut below a natural joint.

Type 5. An arrow with an average total length of 48 cms. from the tip to the notch. The head is of ivory, similar to Type 4 but smaller, the average length being

11 cms. The pointed tip is painted red, as Type 3, and a red band is painted just above the orifice of the reed shaft. The top of the shaft is decorated with alternate blue and red bands spaced at intervals of 5 mm. No feathers are attached to this type of arrow. The notch is square cut.

It is evident that the five types of arrows were used for different targets. Undoubtedly the feathers were necessary for the accurate flight of Types 1, 2 and 3 owing to their irregular and ill-balanced heads. The significance of the red paint on the tips of Types 3 and 5 is uncertain, but, as has already been stated above, it is probable that it represented either blood or poison. No trace of it was found on any of the other three types. It was thought at first that these arrows were poisoned, but analysis by Mr. Lucas proved that the colouring matter was merely red ochre, and no trace of poison was found.

Petrie also found ivory arrow heads in the royal tombs at Abydos. He states: "They are often tipped with red ochre, which has been supposed to be a poisoned tip, though iron oxide would be the worst substance to maintain a poison; probably the red colour was put on with the idea of sympathetic magic, in order to draw the arrow to the blood of the animal at which it was shot" ⁽¹⁾. Dr. Reisner found similar arrows in Tomb No. 284 at Naga ed-Der ⁽²⁾ in 1903, but the tips were stained with a black pigment and as cases to protect the points were found with them we may conclude with more or less certainty that they were poisoned. Dr. Reisner suggests that the colouring matter was not the poison itself but was only put on to show which arrows had been treated. He is of the opinion that the poisons used were either vegetable alkaloids or snake virus and would not be traceable under analysis after so great a period of time. We must therefore not overlook the possibility of their being originally poisoned arrows.

Cat. No. 443. Bundle of 122 arrows of Type 4. Found lying over the group of disks on the north side of Magazine Z.

Cat. No. 444. Bundle of 78 arrows of Type 5. Found lying over the group of disks on the north side of Magazine Z.

Cat. No. 445. Leather quiver containing an assortment of the five different types of arrows. Total 144. Size 46 cms. in length, 1 cm. in diameter at the top and 11 cms. in diameter at the bottom. It was made from a thick piece of hide with the hair on the exterior. It had been bent in a tubular form with both edges joined by stitching. The base was apparently formed by a circular piece of soft leather stitched to the hard leather tube. The removal of the arrows entailed the destruction of the quiver owing to its extremely fragile condition. Found lying on its side on the S.E. corner of Magazine Z.

Cat. No. 446. Forty-two arrows. Type 5. Found in the leather quiver.

Cat. No. 447. Seventy-nine arrows. Type 4. Found in leather quiver.

Cat. No. 448. Eight arrows. Type 2. They were bound together at the top and bottom with strips of papyrus. Found in leather quiver.

⁽¹⁾ PETRIE. *The Royal Tombs of the Earliest Dynasties*. Part II, p. 34-35.

⁽²⁾ Work of the Expedition of the University of California at Naga ed-Der. (*Annales du Service des Antiquités*, Vol. V, Pl. VII).

Cat. No. 449. Five arrows. Type 3. Found in leather quiver.

Cat. No. 450. Ten arrows. Type 1. They were bound together at the top and bottom with strips of papyrus. Found in leather quiver.

Cat. No. 451. Convertable arrow head with a point at one end and a flatish barbed tip at the other. Made of bone with incised decoration in red. (Plate 22a.). A curious feature is the obvious attempt to copy the natural barbed tip of the arrow Type 3. For example the barbed edges of the "blade" have been produced by the stroke of a file, downwards on one side and upwards on the other. Size 20 cms. long. Found with the bundle of arrows above the disks on the north side of Magazine Z.

Cat. No. 452. Arrow head as 451. Size 14 cms. long. Found with 451.

Cat. No. 453. Arrow head as 451. Size 14 cms. long. Found with 451.

Cat. No. 454. Arrow head as 451. Size 12½ cms. long. Found with 451.

Cat. No. 455. Wooden spear with an ivory head probably made from a natural elephant tusk. (Plate 22b). Only fragments of the wooden shaft remain and the length is uncertain. The shaft was socketted into the natural hollow core of the tusk and further secured by two copper nails which passed through each side of the base. For details of construction see Fig. 14. Size of head 31 cms. in

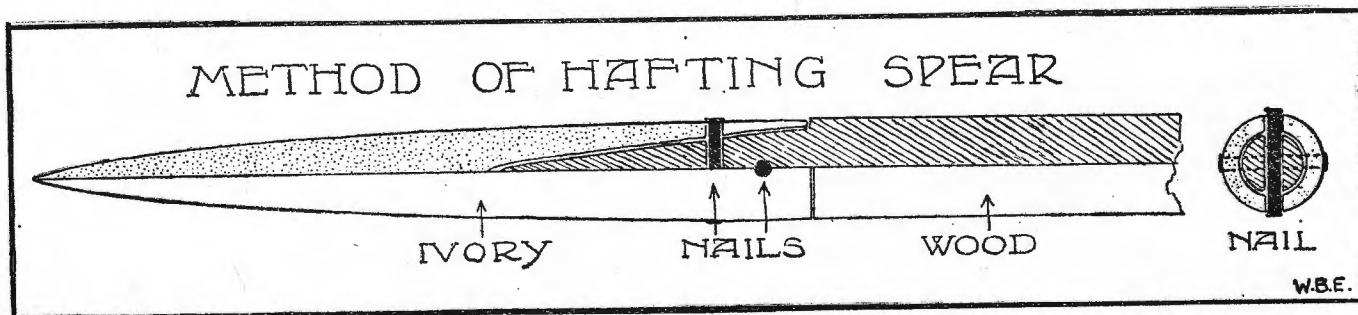


FIG. 14

length and 4 cms. in diameter. Found lying against the south wall of Magazine BB.

Cat. No. 456 Three ivory objects of unknown use. (Plate 19b). See Fig. 15. A hole for a tenon was cut in the base and a smaller hole cut in the side, in which was found fragment of cord, joins the larger hole in the centre. Size 62 mm. in width. Found in a row in the centre of Magazine PP.

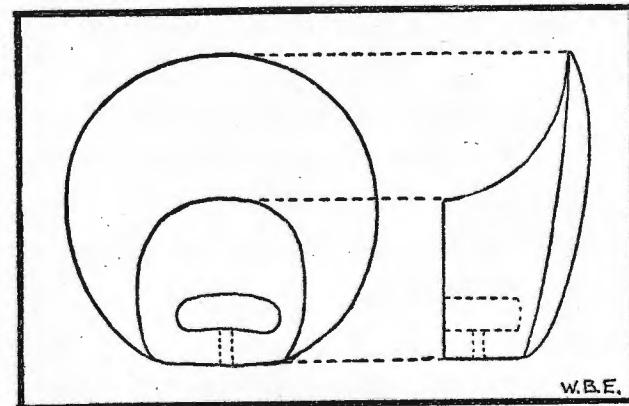


FIG. 15

Chapter XI.
THE POTTERY
BY
ZAKI YUSEF SAAD

Eighteen distinct types were found in the mastaba, all of which came from the magazines. Although not a very large selection it is the most complete group yet found *in situ* in a single large tomb of Dyn. 1. The forms are reproduced on Plate 27. The first four types are drawn at a scale of 1/10 and the others at 1/5.

Type 1. Red ware with two incised bands round the shoulders, and a rounded base. These jars had high conical mud sealings impressed with the seals of Udimu and Hemaka. Similar examples with only minor differences have been found at Abydos (*Abydos*. Vol. I, Pl. XXXII, No. 102) and at Turah (JUNKER. *Über die Grabungen in Turah*, p. 32. Type VIII). Two hundred and twenty-four examples of this type were found.

Type 2. Red ware. Similar to Type 1 but having only one band round the shoulder. Examples have been found at Turah (JUNKER. *Über die Grabungen in Turah*, p. 32. Type X). It occurs in Dyn. III with a ring round the base (GARSTANG. *Mahasna and Bet Khallaf*, Pl. XXXI, Nos. 21 and 26). Three hundred and seventy-four examples of this type were found.

Type 3. Red ware. Wider and shorter than Type 2 and without the band. Compare with other early Dynastic examples from Naga ed-Der (REISNER. *Early Dynastic Cem. of Naga ed-Der*. Part I, p. 91. Type II) and Abydos (PETRIE, *Abydos*, Vol 1, Pl. XXXII, No. 104, p. 14). One hundred and fifty-three examples of this type were found.

Type 4. Red ware with faded buff slip. It occurs in Predynastic times (BRUNTON. *Gau and Badari*, Vol. I, Pl. XIV, No. 81G, p. 15). Only five examples of this type were found, all in Magazine F.

Type 5. Red ware with cream slip. Fifty-four examples with conical sealings were found in Magazine Y. The type was common in Predynastic times (PETRIE. *Prehistoric Corpus*. Pl. XLIX. No. 46) although in these early examples the base is more pointed and the curve under the rim is wider. Examples dated to Dyn. II were found at Nag ed-Der (REISNER. *Naga ed-Der*, Vol. I, p. 92. Type III) and it continued down to Dyn. V (BRUNTON. *Gau and Badari*. Vol. Pl. LXXIX, No. 61N.).

Type 6. Red ware. Two examples were found in Magazine AA. (compare with PETRIE. *Tarkhan I and Memphis V*. Pl. XX, No. 36, p. 18 sec. 33).

Type 7. Red ware pebble polished. Nine examples were found in Magazine Y all of which were sealed with clay. This type occurs in Predynastic times (PETRIE. *Prehistoric Corpus*. Pl. LI. No. 67) and a slightly more rotund form of this pot continued in use until the fifth dynasty (PETRIE. *Abydos*, Vol. I, p. 14). Engelbach classes it with pottery of Dyn. XII (*Riqqeh and Memphis VI*, Pl. XXXI, No. 55g).

Type 8. Red ware. Thirty-six examples were found in Magazine W. Compare with examples from Abydos (PEET. *Cem. of Abydos*, Vol. II, Pl. XXVIII. No. 168) and Turah (JUNKER. *Über die Grabungen in Turah*, Type XXIX, p. 35 and Pl. XLIIa).

Type 9. Red ware. Compare with examples from Abydos (PEET. *Cem. of Abydos* Vol. II. Pl. XXVIII. No. 601) and Turah (JUNKER. *Über die Grabungen, in Turah*, Type XXVII, p. 35). Fifteen examples of this type were found.

Type 10. Red ware. Some of these jars were badly fired. Twenty-six examples were found in Magazine W. The form is very common and has been found at Abydos, Turah and Tarkhan.

Type 11. Red ware. Three examples were found in Magazine Q, with lids. Similar lids were found by Petrie (PETRIE. *Tarkhan I and Memphis V*. Pl. XX. No. 35).

Type 12. Red ware. Two examples were found in Magazine W. It differs from the other pottery in both colour and material, and has been identified by Petrie as Aegean but Peet was of the opinion that it was of Syrian origin (PEET. *Cem. of Abydos*, Vol. I, p. 6, Sect. 7). This so called foreign ware was found at Abydos in the tombs of Zer, Udimu, Semerkhet and Zet (PETRIE. *Tarkhan I and Memphis V*, p. 17).

Type 13. Red ware. One example was found in Magazine FF.

Type 14. Red ware. Eight examples were found in Magazine Y. This type is similar to the bowls 14 m., 18 m. and 18 k. in PETRIE. *Tarkhan I and Memphis V*, Pl. XLVII, Page 28. They were also found at Turah (JUNKER. *Über die Grabungen in Turah*, Type XCVI, p. 41-2).

Type 15. Red ware. Eight bowls were found in Magazine Y. Examples were found as Tarkhan (PETRIE. *Tarkhan I and Memphis V*, Pl. XLVI, No. 7d, p. 28) and at Turah (JUNKER. *Über die Grabungen in Turah*, Type CXIII, p. 43).

Type 16. Red ware. Five bowls were found in Magazine Y. This type is boat-shaped. It was found at Tarkhan (PETRIE. *Tarkhan I and Memphis V*, Pl. XXVIII, No. 11b), at Turah (JUNKER. *Über die Grabungen in Turah*, Type CXIV, p. 43), and at Abydos (PETRIE. *Abydos I*. Tomb No. 16, Pl. XL, No. 21, p. 18).

Type 17. Red ware. One example was found in Magazine F. Similar pots were found at Qau and Badari but they are rough forms, half-baked and with unfinished bases. Our specimen is not badly finished and has rounded holes round its flaring sides. According to Brunton it continues down to the IVth Dynasty. (*Qau and Badari I*. Pl. XIII, Nos. 9 k and 9 m., p. 15). Examples of Dynasty III have been found at Naga ed-Der (REISNER. *Naga ed-Der III*. p. 84, Fig. 36, Nos. 2 and 3).

Type 18. Red ware. Three examples were found in Magazine Y. It occurs at Abydos in Tomb No. M. 16. (PETRIE. *Abydos I*, Pl. XL, No. 37), and at Tarkhan (PETRIE. *Tarkhan I and Memphis V*, Pl. XLVI, No. 13f.).

Cat. Nos. 457-536. Eighty red ware vases of Type 1. Arranged in rows in an upright position in Magazine C. All with conical sealings bearing the names of Udimu and Hemaka.

Cat. Nos. 537-639. One hundred and three red ware vases of Type 2. Conical sealings of Udimu and Hemaka. Found mixed with Cat. Nos. 457-536 in Magazine C.

Cat. Nos. 640-644. Five small red ware vases of Type 9. Found at the north end of Magazine C.

Cat. Nos. 645-797. One hundred and fifty-three red ware vases of Type 2. Conical sealings bearing the names of Udimu and Hemaka. From Magazine D.

Cat. Nos. 798-837. Forty red ware vases of Type 1. Conical sealings of Udimu and Hemaka. Found mixed with Cat. Nos. 645-797 in Magazine D.

Cat. Nos. 838-841. Four red ware vases of Type 3. Flat sealings bearing the name of Hemaka. From Magazine D.

Cat. Nos. 842-1023. One hundred and eighty-two red ware vases of Type 2. Flat sealings bearing the name of Hemaka. Arranged in rows in an upright position in Magazine E.

Cat. Nos. 1024-1127. One hundred and four red ware vases of Type 1. Conical sealings bearing the names of Udimu and Hemaka. Arranged in rows in an upright position in Magazine F.

Cat. Nos. 1128-1187. Sixty red ware vases of Type 2. Conical sealings bearing the name of Udimu and Hemaka. From Magazine F.

Cat. Nos. 1188-1192. Five red ware vases of Type 4. From Magazine F.

Cat. Nos. 1193.—Red ware bowl with four holes cut through the sides. Type 17. From Magazine F.

Cat. Nos. 1194-1245. Fifty-two red ware vases of Type 5. Unstamped conical sealings. Arranged in rows at the west end of Magazine Y.

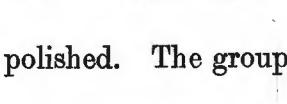
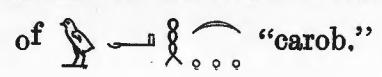
Cat. Nos. 1246-1247. Two red ware vases of Type 7. Pebble polished. The group  is painted on the shoulder in black ink (Fig. 16). On examination the contents proved to be nothing but sand with no trace of vegetable matter. The space between the \circ and the \square suggests the missing sign \rightarrow and after a study of the offering list I have come to the conclusion that we have here a variant of  "carob."



FIG. 16

Cat. Nos. 1248-1253. Six red ware vases of Type 7. They bear the word  painted on the side with black ink (Fig. 16). When we examined the contents I identified them as a fruit well known to the Egyptians as *nbk* (Arabic *بَرْقِيل*). My identification was confirmed by Dr. Keimer when he saw the vases in Cairo. The group  *bs* written on the vases obviously denotes their contents and probably has the same meaning as  *nbs*, *Zigyphus spina Christi* WILLD (1). Dr. Keimer informs us that Dr. Anthes showed him a vase bearing the group  in black ink which contained well preserved *nbs*-fruit. This vase was found in the Chicago excavations at Medinet Habu in 1932.

The placing of the sign  before the  and *vice versa* is not unusual (2), but the absence of the  is puzzling. If we had found only one or two examples we might consider that its absence was unintentional, but as we have no less than six specimens, we must consider it a variant of the word denoting the *nbk*-fruit.

Cat. No. 1254. Red ware vase of Type 7 bearing the word  in black ink, and was found to contain grains of wheat. The group   may be translated as either "grain" or "red" (3), but taking into consideration the fact that the word on the jar certainly denotes its contents and that these contents are proved to be wheat grains we may accept the former interpretation (4).

Cat. Nos. 1255-1262. Eight red ware plates of Type 15. From Magazine Y.
Cat. Nos. 1263-1267. Five red ware dishes of Type 16. From Magazine Y.
Cat. Nos. 1268-1275. Eight large red ware bowls of Type 14. From Magazine Y.
Cat. Nos. 1276-1278. Three small red ware bowls of Type 18. From Magazine Y.
Cat. Nos. 1279-1280. Two red ware vases of Type 6. Pebble polished. From the south-east corner of magazine AA.
Cat. Nos. 1281-1316. Thirty-six red ware vases of Type 8. From Magazine W.
Cat. Nos. 1317-1321. Five red ware vases of Type 9. From Magazine W.
Cat. Nos. 1322-1347. Twenty-six red ware vases of Type 10. From Magazine W.
Cat. Nos. 1348-1349. Two flasks of Type 12. From Magazine W.
Cat. Nos. 1350-1354. Five red ware vases of Type 9. From Magazine X.
Cat. Nos. 1355-1357. Three red ware vases of Type 11. Rim and neck painted black. From Magazine Q.
Cat. No. 1358.—Red ware vase of Type 13. From Magazine FF.

(1) L. KEIMER. *Die Gartenpflanzen im Alten Aegypten*. (1924) No. 43, p. 64-70, p. 160-163, p. 184.

(2) FIRTH AND GUNN. *Teti Pyramid Cemeteries*, p. 95.

(3) *Wörterbuch der Aegyptischen Sprache*. V p. 487.

(4) It is my intention to devote further study to this subject.

Chapter XII.

POT MARKS

BY

ZAKI YUSEF SAAD

Three hundred and twenty-nine marks were traced from the pottery found in the mastaba. Most of them were on the large jars of Types 1, 2 and 3. These marks occur frequently on pottery from the Prehistoric times down to the Greco-Roman period. We have seen them side by side with hieroglyphic inscriptions in Dyn. 1 (PETRIE. *Royal Tombs*, Vol. I, Pl. XLVII-XLVIII, pages 29-31, and Vol. II, Pl. LVa-LVd, page 47. Also BRUNTON. *Qau and Badari*. Vol. I, Pl. XXI, page 18, and Pl. XXXIV, page 68).

If, as has been suggested, these marks were the origin of hieroglyphic writing, they would not have been used together with hieroglyphs. But as they are found at a period when hieroglyphic writing was fully formed we may conclude that they bear little connection with it and were used almost exclusively for the marking of pottery.

All the examples from the mastaba are known, with one exception which occurs on the shoulder of a vase Type 12 from Magazine FF. It shows two parallel lines above a crocodile.

Some Egyptologists divide the marks into two kinds :

- A.* The potter's marks, scratched before the firing;
- B.* The owner's marks scratched after the firing, sometimes before and sometimes after the slip was put on.

To my mind these marks which we have found on the jars are neither the work of the potter nor of the owner. If they were potters' marks why are they absent on so many jars ? It may be said that the jars without marks were made in a special shop by one man who did not mark his pots. And here one may say that a great man like the owner of this mastaba probably got his pottery from one place and in large quantities which, if the theory is correct, would all be marked.

Again, why, if these were owners' marks, were so many of the jars unmarked ?

So one can reasonably come to a conclusion that the marks were neither potters' nor owners' marks.

What do they denote ? Perhaps they refer to the contents of the jars, as in the case of the 9 jars found in Magazine Y, Type 7 (See Pl. 27) containing fruit and with the names of the contents inscribed on each one ; or, if this is a weak argument, they may denote the place where the pot was bought.

Again, why are some of the jars uninscribed if the marks were used to show the contents ? To this question one might answer that marks were put on different pots except on those the contents of which were well known and therefore needed no distinguishing marks.

The pot mark bearing the name of Semerkhet, although certainly intrusive, is of interest when we compare it with those examples found by Petrie at Abydos (1). (Fig. 17):

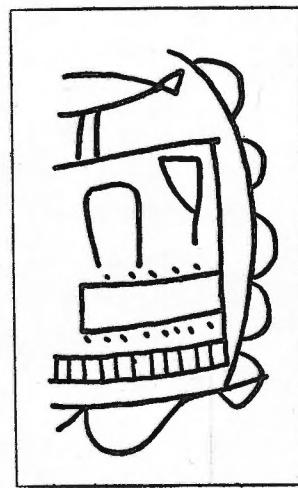


FIG. 17

(1) PETRIE. *Royal Tombs of the First Dynasty.* Vol. I, p. 30, Pl. XLIV.

Chapter XIII.

STONE VESSELS, ETC.

A large collection of stone vases, tables, ring stands, etc., were found in the pit and burial chamber, and although the majority had been smashed we were able to make a corpus of 51 different types. Their value lies in the fact that they are the largest group yet found in a single Dyn. I tomb. It is possible that the tables with flat tops, Types 40, 41 and 42 are of a later period for hitherto no examples have been found of a date prior to the end of Dyn. II. Nevertheless they may well belong to Dyn. I for we have no reason to suppose they were intrusive.

Type 1. 84 examples found: 79 of schist, 3 of alabaster, 1 of volcanic ash, and 1 of diorite.

Type 2. 1 example found, of alabaster.

Type 3. 15 examples found: 10 of alabaster, 2 of dolomite, 1 of breccia, 1 of marble, and 1 of crystal.

Type 4. 5 examples found: 3 of alabaster and 2 of porphyritic rock.

Type 5. 50 examples found: 14 of volcanic ash, 22 of schist, 7 of diorite, 6 of alabaster, and 1 in mottled, black and white porphyritic rock.

Type 6. 9 examples found, 7 of diorite, and 2 of alabaster.

Type 7. 5 examples found, all of diorite.

Type 8. 31 examples found, all of schist.

Type 9. 1 example, of diorite.

Type 10. 2 examples found, of alabaster.

Type 11. 1 example, of alabaster.

Type 12. 1 example, of alabaster.

Type 13. 1 example, of diorite.

Type 14. 1 example, of alabaster.

Type 15. 1 example, of alabaster.

Type 16. 12 examples found: 11 of alabaster and 1 of breccia.

Type 17. 1 example found, of diorite.

Type 18. 1 example found, of alabaster.

Type 19. 2 examples found, of alabaster.

Type 20. 5 examples found: 4 of alabaster, and 1 of mottled, black and white porphyritic rock.

Type 21. 4 examples found, of alabaster.

Type 22. 3 examples found, all of alabaster.

Type 23. 12 examples found, all of alabaster.

Type 24. 7 examples found, all of alabaster.

Type 25. 4 examples found, all of alabaster.

Type 26. 8 examples found, all of alabaster.

Type 27. 3 examples found, all of alabaster.

Type 28. 22 examples found, all of alabaster.

Type 29. 3 examples found, all of alabaster.

Type 30. 12 examples found, all of alabaster.

Type 31. 2 examples found, all of alabaster.

Type 32. 1 example found, of alabaster.

Type 33. 1 example found, of alabaster.

Type 34. 1 example found, of alabaster.

Type 35. 1 example found, of alabaster.

Type 36. 1 example found, of crystal.

Type 37. 2 examples found, of crystal.

Type 38. 4 examples found, all of alabaster.

Type 39. 4 examples found, all of alabaster.

Type 40. 1 example found, of alabaster.

Type 41. 37 examples found: 34 of alabaster, 2 of mottled, black and white porphyritic rock, and 1 of diorite.

Type 42. 1 example found, of alabaster.

Type 43. 2 examples found, both of limestone.

Type 44. 2 examples found, both of yellow limestone.

Type 45. 1 example found, of limestone.

Type 46. 1 example found, of limestone.

Type 47. 2 examples found, both of alabaster.

Type 48. 5 examples found, all of alabaster.

Type 49. 1 example found, of alabaster.

Type 50. 1 example found, of alabaster.

Type 51. 6 examples found, all of alabaster.

Cat. No. 1359.—Alabaster vase. Height 38 cms. Diam. 23 cms. Type 35.

Cat. No. 1360.—Alabaster vase. Height 30 cms. Diam. 16 cms. Type 27.

Cat. No. 1361.—Alabaster vase. Height 24 cms. Diam. 14 cms. Type 26.

Cat. No. 1362. Alabaster vase. Height 17 cms. Diam. 13 cms. Type 21.

Cat. No. 1363. Alabaster ring stand. Height 17 cms. Diam. 21 cms. Type 50.

Cat. No. 1364. Alabaster vase. Height 21 cms. Diam. 11 cms. Type 31.

Cat. No. 1365. Limestone ring stand painted yellow. Height 8 cms. Diam. 16 cms. Type 43.

Cat. No. 1366. Yellow limestone ring stand. Height 7 cms. Diam. 44 cms. Type 44.

Cat. No. 1367. Alabaster vase. Height 26 cms. Diam. 12 cms. Type 28.

Cat. No. 1368. Alabaster vase. Height 16 cms. Diam. 9 cms. Type 30.

Cat. No. 1369. Alabaster vase. Height 15 cms. Diam. 10 cms. Type 30. Rim and base cut away.

Cat. No. 1370. Alabaster bowl. Height 11 cms. Diam. 26 cms. Type 4.

Cat. No. 1371. Alabaster bowl. Height 11 cms. Diam. 21 cms. Type 3.

Cat. No. 1372. Diorite bowl. Height 10 cms. Diam. 19 cms. Type 9.

Cat. No. 1373. Alabaster bowl. Height 8 cms. Diam. 28 cms. Type 14.

Cat. No. 1374. Alabaster bowl. Height 7 cms. Diam. 22 cms. Type 16.

Cat. No. 1375. Alabaster bowl. Height 7 cms. Diam. 24 cms. Type 16.

Cat. No. 1376. Alabaster bowl. Height 7 cms. Diam. 20 cms. Type 16.

Cat. No. 1377. Diorite bowl. Height 11 cms. Diam. 23 cms. Type 7.

Cat. No. 1378. Alabaster bowl. Height 8 cms. Diam. 17 cms. Type 15.

Cat. No. 1379. Alabaster bowl. Height 11 cms. Diam. 25 cms. Type 6.

Cat. No. 1380. Alabaster bowl. Height 8 cms. Diam. 17 cms. Type 10.

Cat. No. 1381. Fragment of alabaster bowl. About 6 cms. high and 17 cms. in diam. Type 5.

Cat. No. 1382. Fragment of alabaster bowl. Height 6 cms. Diam. 15 cms. Type 20.

Cat. No. 1383. Fragment of alabaster vase. Height 5 cms. Diam. 5 cms. Type 32.

Cat. No. 1384. Alabaster bowl. Height 3 cms. Diam. 11 cms. Type 2.

Cat. No. 1385. Fragment of alabaster bowl. Height 6 cms. Diam. 20 cms. Type 16.

Cat. No. 1386. Fragments of alabaster table. Height 3 cms. Diam. 32 cms. Type 41.

Cat. No. 1387. Fragments of detachable neck and shoulders of alabaster vase. Height 5 cms. Diam. 22 cms. Type 19.

Cat. No. 1388. Ditto. Height 6 cms. Diam. 14 cms. Type 19.

Cat. No. 1389. Alabaster ring stand. Height 23 cms. Diam. 22 cms. Type 51.

Cat. No. 1390. Alabaster ring stand. Height 25 cms. Diam. 22 cms. Type 48.

Cat. No. 1391. Alabaster vase. Height 18 cms. Diam. 17 cms. Type 25.

Cat. No. 1392. Alabaster vase. Height 25 cms. Diam. 19 cms. Type 21.

Cat. No. 1393. Alabaster ring stand. Fragments. Type 49.

Cat. No. 1394. Alabaster ring stand. Height 23 cms. Diam. 23 cms. Type 48.

Cat. No. 1395. Alabaster stool. Height 21 cms. Diam. 28 cms. Type 39.
Cat. No. 1396. Alabaster stool. Height 29 cms. Diam. 35 cms. Type 39.
Cat. No. 1397. Alabaster ring stand. Height 25 cms. Diam. 17 cms. Type 48.
Cat. No. 1398. Alabaster ring stand. Height 24 cms. Diam. 24 cms. Type 51.
Cat. No. 1399. Fragment of alabaster ring stand. Type 51.
Cat. No. 1400. Fragment of alabaster ring stand. Height 25 cms. Type 51.
Cat. No. 1401. Alabaster ring stand. Height 24 cms. Diam. 19 cms. Type 48.
Cat. No. 1402. Alabaster vase. Height 23 cms. Diam. 15 cms. Type 28.
Cat. No. 1403. Fragment of alabaster vase. Height 25 cms. Diam. 19 cms. Type 38.
Cat. No. 1404. Alabaster vase. Height 26 cms. Diam. 21 cms. Type 22.
Cat. No. 1405. Fragment of alabaster vase. Diam. 24 cms. Type 23.
Cat. No. 1406. Alabaster vase. Height 33 cms. Diam. 20 cms. Type 26.
Cat. No. 1407. Alabaster ring stand. Height 25 cms. Diam. 22 cms. Type 48.
Cat. No. 1408. Fragment of alabaster vase. Diam. 21 cms. Type 26.
Cat. No. 1409. Diorite bowl. Height 9 cms. Diam. 18 cms. Type 17.
Cat. No. 1410. Limestone ring stand painted yellow. Height 7 cms. Diam. 15 cms. Type 45.
Cat. No. 1411. Yellow limestone ring stand. Height 8 cms. Diam. 18 cms. Type 44.
Cat. No. 1412. White limestone ring stand painted yellow. Height 8 cms. Diam. 17 cms.
Type 43.
Cat. No. 1413. White limestone ring stand. Height 6 cms. Diam. 17 cms. Type 46.
Cat. No. 1414. Alabaster ring stand. Height 25 cms. Diam. 15 cms. Type 51.
Cat. No. 1415. Alabaster ring stand. Height 24 cms. Diam. 14 cms. Type 47.
Cat. No. 1416. Fragment of alabaster bowl. Height 5 cms. Diam. 15 cms. Type 5.
Cat. No. 1417. Alabaster cup. Height 7 cms. Diam. 8 cms. Type 12.
Cat. No. 1418. Alabaster vase. Height 33 cms. Diam. 18 cms. Type 24.
Cat. No. 1419. Alabaster ring stand. Height 21 cms. Diam. 18 cms. Type 48.
Cat. No. 1420. Alabaster vase. Height 23 cms. Diam. 10 cms. Type 33.
Cat. No. 1421. Small alabaster bowl. Height 10 cms. Diam. 5 cms. Type 29.
Cat. No. 1422. Diorite bowl. Height 6 cms. Diam. 14 cms. Type 13.
Cat. No. 1423. Schist bowl. Height 4 cms. Diam. 18 cms. Type 8.
Cat. No. 1424. Volcanic ash bowl. Height 7 cms. Diam. 23 cms. Type 5.
Cat. No. 1425. Schist bowl. Height 6 cms. Diam. 22 cms. Type 5.
Cat. No. 1426. Schist bowl. Height 8 cms. Diam. 37 cms. Type 1.
Cat. No. 1427. Volcanic ash bowl. Height 7 cms. Diam. 23 cms. Type 5.
Cat. No. 1428. Fragments of schist bowl. Height 7 cms. Diam. 24 cms. Type 5.
Cat. No. 1429. Fragments of volcanic ash bowl. Height 6 cms. Diam. 19 cms. Type 5.
Cat. No. 1430. Schist bowl. Height 8 cms. Diam. 25 cms. Type 5.
Cat. No. 1431. Fragments of schist bowl. Height 6 cms. Diam. 36 cms. Type 1.
Cat. No. 1432. Fragments of alabaster bowl. Height 10 cms. Diam. 23 cms. Type 16.
Cat. No. 1433. Alabaster bowl. Height 9 cms. Diam. 24 cms. Type 16.
Cat. No. 1434. Fragments of alabaster bowl. Height 5 cms. Diam. 26 cms. Type 16.

Cat. No. 1435. Alabaster bowl. Height 6 cms. Diam. 24 cms. Type 16.
Cat. No. 1436. Dolomite bowl. Height 10 cms. Diam. 20 cms. Type 3.
Cat. No. 1437. Diorite bowl. Height 6 cms. Diam. 15 cms. Type 7.
Cat. No. 1438. Diorite bowl. Height 8 cms. Diam. 14 cms. Type 7.
Cat. No. 1439. Diorite bowl. Height 7 cms. Diam. 14 cms. Type 7.
Cat. No. 1440. Fragments of diorite bowl. Height 8 cms. Diam. 13 cms. Type 6.
Cat. No. 1441. Alabaster bowl. Height 10 cms. Diam. 25 cms. Type 16.
Cat. No. 1442. Alabaster bowl. Height 12 cms. Diam. 20 cms. Type 3.
Cat. No. 1443. Alabaster table. Height 12 cms. Diam. 35 cms. Type 40.
Cat. No. 1444. Alabaster table. Height 5 cms. Diam. 36 cms. Type 42.
Cat. No. 1445. Alabaster table. Height 3 cms. Diam. 37 cms. Type 41.
Cat. No. 1446. Alabaster ring stand. Height 23 cms. Diam. 18 cms. Type 51.
Cat. No. 1447. Alabaster vase. Height 42 cms. Diam. 22 cms. Type 23.
Cat. No. 1448. Alabaster vase. Height 10 cms. Diam. 12 cms. Type 34.
Cat. No. 1449. Alabaster bowl. Height 7 cms. Diam. 11 cms. Type 11.
Cat. No. 1450. Alabaster ring stand. Height 25 cms. Diam. 16 cms. Type 48.
Cat. No. 1451. Alabaster stool. Height 27 cms. Diam. 32 cms. Type 39.
Cat. No. 1452. Alabaster stool. Height 35 cms. Diam. 41 cms. Type 39.
Cat. No. 1453. Alabaster ring stand. Height 74 cms. Diam. 24 cms. Type 47.
Cat. No. 1454. Alabaster spouted bowl. Height 15 cms. Diam. 29 cms. Type 18.
Cat. Nos. 1455-1463. Large fragments of nine large alabaster vases. Type 23.
Cat. Nos. 1464-1470. Large fragments of seven large alabaster vases. Type 24.
Cat. Nos. 1471-1472. Large fragments of two alabaster vases. Type 27.
Cat. Nos. 1473-1478. Large fragments of five alabaster vases. Type 26.
Cat. Nos. 1479-1488. Fragments of ten alabaster vases. Type 30.
Cat. Nos. 1489-1490. Fragments of two alabaster vases. Type 22.
Cat. Nos. 1491-1493. Fragments of three alabaster vases. Type 38.
Cat. Nos. 1494-1495. Fragments of two alabaster vases. Type 21.
Cat. Nos. 1496-1513. Fragments of eighteen alabaster vases. Type 28.
Cat. Nos. 1514-1516. Fragments of three alabaster vases. Type 25.
Cat. No. 1517. Fragment of alabaster vase. Type 31.
Cat. Nos. 1518-1519. Fragments of two alabaster vases. Type 29.
Cat. Nos. 1520-1522. Fragments of three alabaster bowls. Type 18.
Cat. No. 1523. Fragment of large alabaster bowl. Type 1.
Cat. Nos. 1524-1526. Fragments of three alabaster bowls. Type 20.
Cat. Nos. 1527-1533. Fragments of seven alabaster bowls. Type 3.
Cat. No. 1534. Fragment of alabaster bowl. Type 6.
Cat. Nos. 1535-1536. Fragments of two alabaster bowls. Type 1.
Cat. Nos. 1537-1538. Fragments of two alabaster bowls. Type 16.
Cat. Nos. 1539-1542. Fragments of four alabaster bowls. Type 5.
Cat. No. 1543. Fragments of alabaster bowl. Type 10.

Cat. Nos. 1544-1545. Fragments of two alabaster bowls. Type 4.
Cat. Nos. 1546-1622. Fragments of seventy-seven schist bowls. Type 1.
Cat. Nos. 1623-1652. Fragments of thirty schist bowls. Type 8.
Cat. Nos. 1653-1671. Fragments of nineteen schist bowls. Type 5.
Cat. No. 1672. Fragments of volcanic ash bowl. Type 5.
Cat. Nos. 1673-1681. Fragments of nine volcanic ash bowls. Type 5.
Cat. No. 1682. Fragment of volcanic ash bowl. Type 1.
Cat. No. 1683. Fragments of breccia bowl. Type 16.
Cat. No. 1684. Ditto. Type 3.
Cat. No. 1685. Fragments of diorite bowl. Type 6.
Cat. No. 1686. Ditto.
Cat. No. 1687. Fragments of mottled black and white porphyritic rock table. Type 41.
Cat. No. 1688. Fragments of diorite bowl. Type 6.
Cat. No. 1689. Ditto.
Cat. No. 1690. Fragments of mottled black and white porphyritic rock table. Type 41.
Cat. No. 1691. Fragments of diorite bowl. Type 7.
Cat. No. 1692. Ditto. Type 5.
Cat. No. 1693. Ditto.
Cat. No. 1694. Fragments of porphyritic rock bowl. Type 4.
Cat. Nos. 1695-1698. Fragments of four diorite bowls. Type 5.
Cat. No. 1699. Fragments of mottled black and white porphyritic rock bowl. Type 4.
Cat. No. 1700. Fragments of dolomite bowl. Type 3.
Cat. No. 1701. Fragments of diorite table. Type 41.
Cat. No. 1702. Fragments of mottled black and white porphyritic rock bowl. Type 5.
Cat. No. 1703. Fragments of grey marble bowl. Type 3.
Cat. No. 1704. Fragments of mottled black and white stone bowl. Type 20.
Cat. No. 1705. Fragments of diorite bowl. Type 5.
Cat. No. 1706. Fragment of volcanic ash bowl. Type 5.
Cat. No. 1707. Alabaster table. Height 3 cms. Diam. 38 cms. Type 41.
Cat. No. 1708. Fragments of diorite bowl. Type 3.
Cat. No. 1709. Ditto. Type 6.
Cat. No. 1710. Fragments of alabaster vase. Type 28.
Cat. No. 1711. Fragments of alabaster bowl. Type 28.
Cat. No. 1712. Fragments of 31 alabaster tables. Type 41.
Cat. No. 1713. Fragments of alabaster vase. Type 28.
Cat. No. 1714. Fragments of diorite vase. Type 1
Cat. No. 1715. Crystal cup. Type 37.
Cat. No. 1716. Crystal cup. Type 36.
Cat. No. 1717. Fragment of crystal cup. Type 37. Inscribed with the name of Semti.
(Plate 28).
Cat. No. 1718. Crystal bowl. Type 3.

Cat. No. 1719. Fragment of a schist bowl. Type I. Inscribed with the group  (¹) (Fig. 18).

Cat. No. 1720. Fragment of a schist bowl. Inscribed with the group  (Fig. 18).

Cat. No. 1721. Fragment of a schist bowl. Inscribed with the group  (Fig. 18).

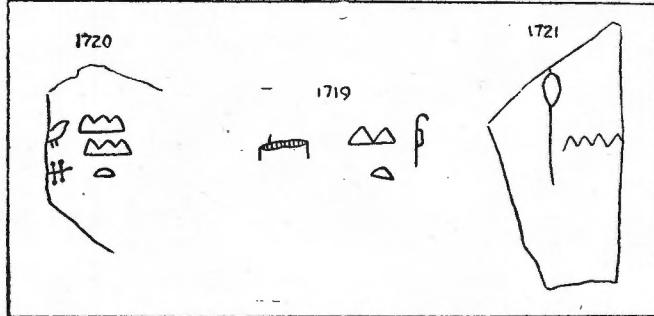


FIG. 18

(¹) Sayce suggested that  is a variant of  (PETRIE. *Royal Tombs of the First Dynasty*. Vol. II. p. 49).

Chapter XIV.

SEALINGS

1. (Fig. 19). This impression was by far the most common and was found on the conical sealings of the large jars Types 1 and 2, in conjunction with impressions of No. 2. (Compare with Petrie No. 161) (¹). The group  was translated by Brugsch as "inspector of canals" and Petrie suggests "superintendent of the inundation" (²). But Gardiner, while suggesting that its literal meaning is "excavator of canals," translates it as "administrator (of a province)" (³), and, as Griffith has pointed out (⁴), the group is always found in connection with the name of a city; we may conclude that administrator or governor of a district is its meaning. The group  which Griffith translates as "promoting the rock of Horus" (⁵), is certainly a place name, to judge from the crenelated oval surrounding it. The group  is most frequently found in connection with the Horus name of a king and Griffith suggests that it must therefore be a title of favour, perhaps "ruling in the king's heart" (⁶).

On this sealing we have the common custom of the inverted repetition of the name of the owner  Hemaka, probably done for decorative purposes, or as Reisner suggests to prevent misreading (⁷).

"APT II.
A. 61."

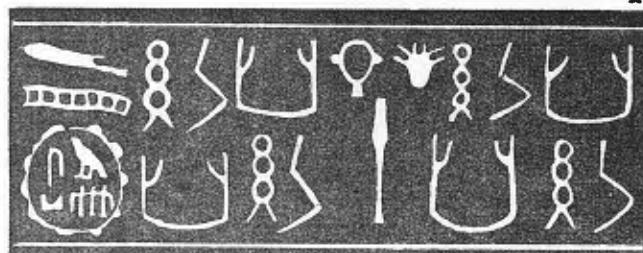


FIG. 19

2

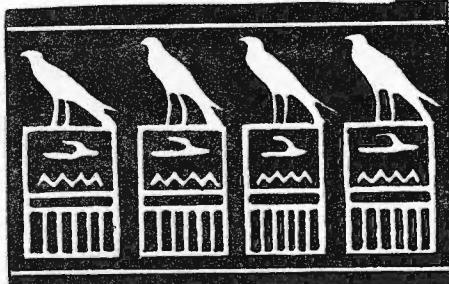


FIG. 20

2. (Fig. 20). Many specimens of this impression were found on the conical sealings of jars of Types 1 and 2. In nearly all cases they were in conjunction with No. 1. The motif is the repetition of the "serekh" of Udimu without any variation.

(¹) PETRIE. *Royal Tombs of the First Dynasty*. Vol. II, Pl. XX.

(²) PETRIE. *History of Egypt*. Vol. I, p. 20.

(³) GARDINER. *Grammar*. p. 467.

(⁴) PETRIE. *Royal Tombs of the First Dynasty*. Vol. II, p. 53.

(⁵) PETRIE. *Royal Tombs of the First Dynasty*. Vol. I, p. 44.

(⁶) PETRIE. *Royal Tombs of the First Dynasty*. Vol. II, p. 53.

(⁷) REISNER. *The Early Dynastic Cemeteries of Naga ed-Der*. Part I, p. 120.

3. (Fig. 21). Only two examples of this impression were found, and these were on the conical sealings of jars of Type 2. Here we have the repetition of three groups, the "serekh" of Udimu,  in a crenellated oval, and .

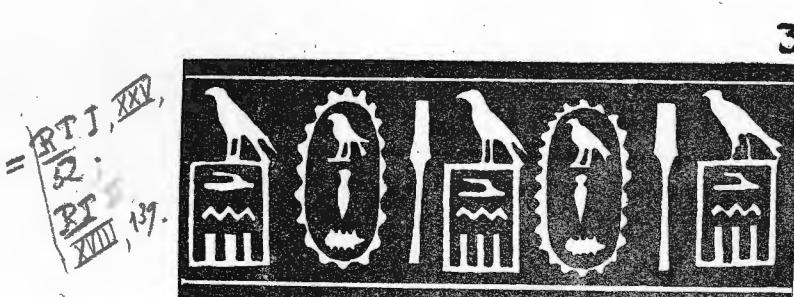


FIG. 21

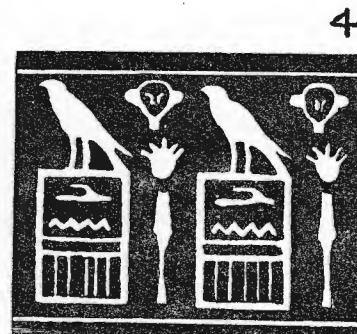


FIG. 22

4. (Fig. 22). A few examples of this impression were found by Firth in the pit. Between the "serekhs" of Udimu is the title  (see No. 1). The shape of the sealings on which this impression was found suggest their having been attached to the cords which bound a leather bag.



FIG. 23

5. (Fig. 23). Numerous examples of this impression were found on conical sealings from the pit and burial chamber. Here again as in No. 1 we have the group  also  but in this case they are connected with a different place name   (see No. 3). The name of Hemaka is again altered in arrangement to give a symmetrical appearance to the design (compare with Petrie, No. 53) (1).

(1) *Royal Tombs of the First Dynasty*. Vol. I, Pl. XXV.

6. (Fig. 24). Numerous examples of this impression were found on the round flat sealings of jars of Type 3 (compare with Petrie, No. 39). (1) Beside the "serekh" of Udimu we have the group  "Treasurer of the King of Lower Egypt." Below is an unusual sign which Griffith suggests may mean *mhr*, "store" (2). Underneath the "serekh" is an emblem of the Saite nome.

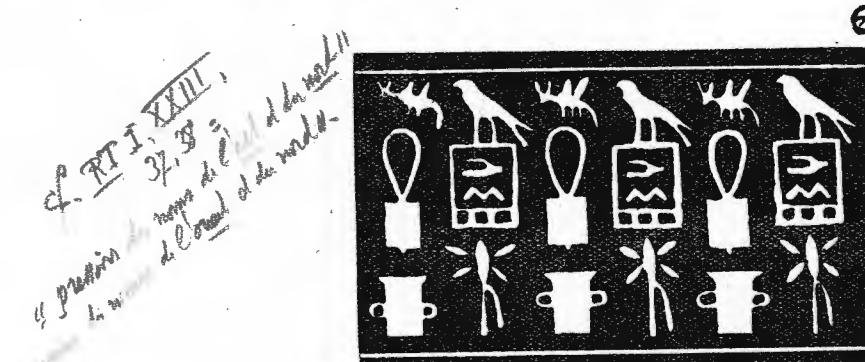


FIG. 24

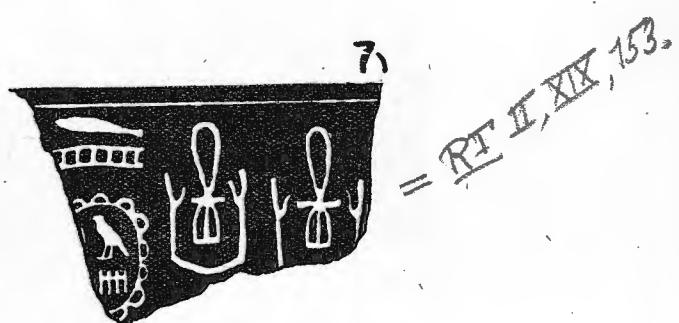


FIG. 25

7. (Fig. 25). Only one example of this impression was found on a conical seal, from the pit (compare with Petrie, No. 153 (3)), which is a more complete example. Griffith is of the opinion that the group  is the name of a person. In support he compares it with Petrie No. 161, identical with our No. 1, in which the same titles appear in a corresponding position. The Abydos specimen is dated to the reign of Udimu; it is thus possible that we have here the name of Hemaka's predecessor.



FIG. 26

8. (Fig. 26). Impressions of the sealing from the leather bag (Cat. No. 434). The first group consists of the figure of the king wearing the red crown, dancing or running behind a bull. Behind him is the "serekh" of Udimu. The second group shows a similar figure wearing the white crown before the seated figure of a monkey holding in extended arms a bowl. In front of the monkey is depicted a standard (?). Behind the king is the "serekh" of Udimu.

⁽¹⁾ PETRIE. *Royal Tombs of the First Dynasty*. Vol. I, p. XXIII.

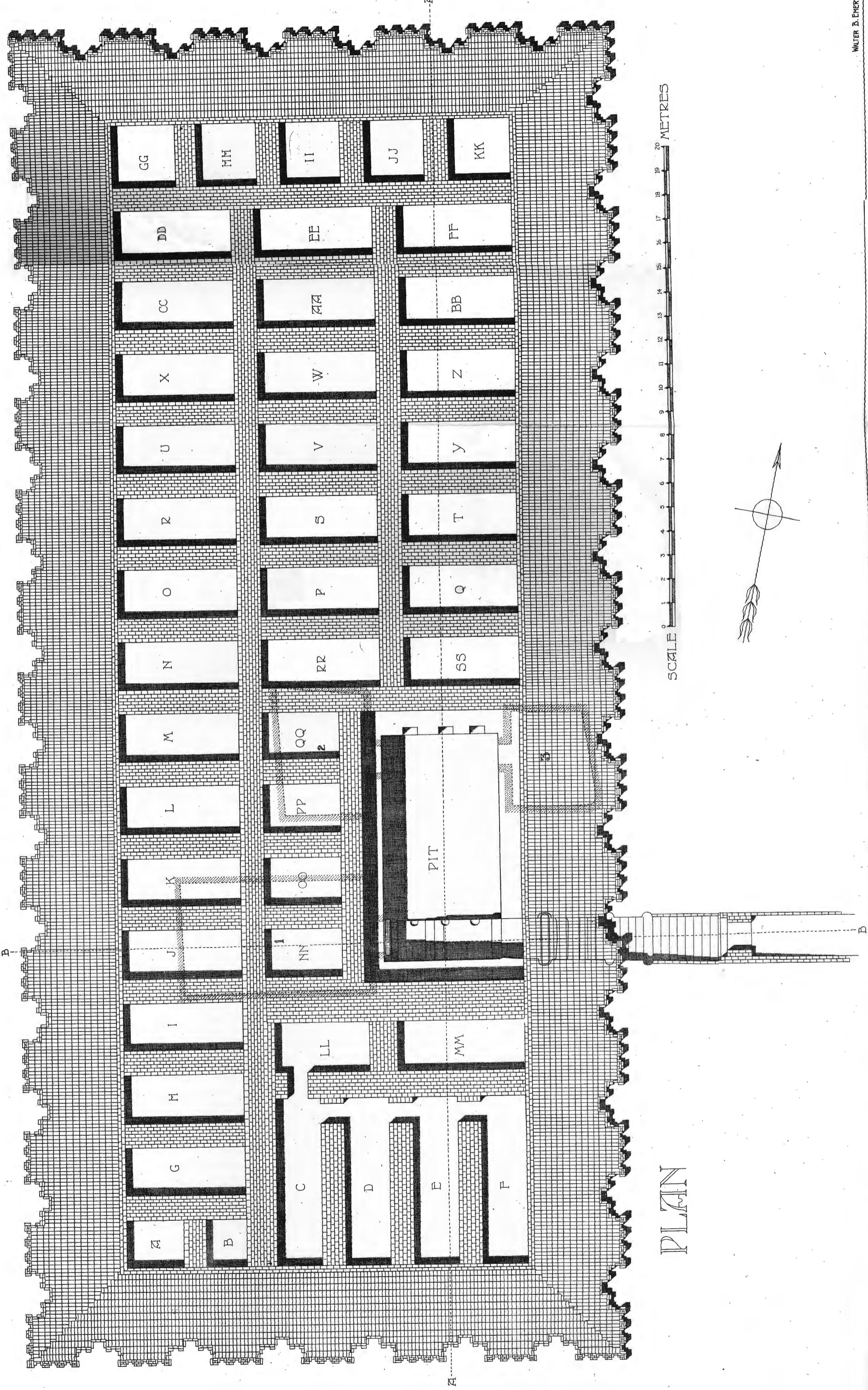
⁽²⁾ *Op. cit.* Vol. I, p. 44.

⁽³⁾ *Op. cit.* Vol. II, p. XIX.

Govt. Press 12210-1936-320 ex.

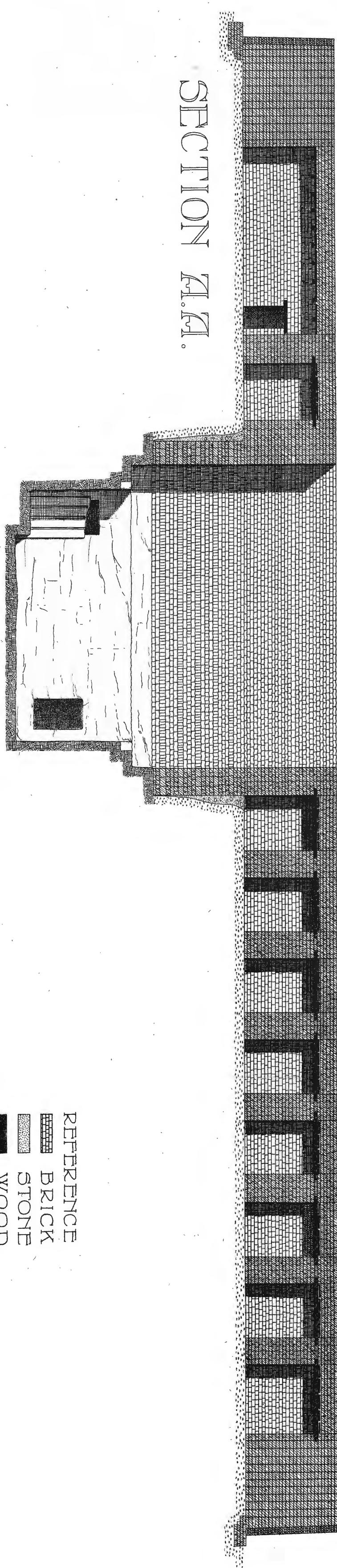
THE TOMB OF HEMENKA

Plate 1.

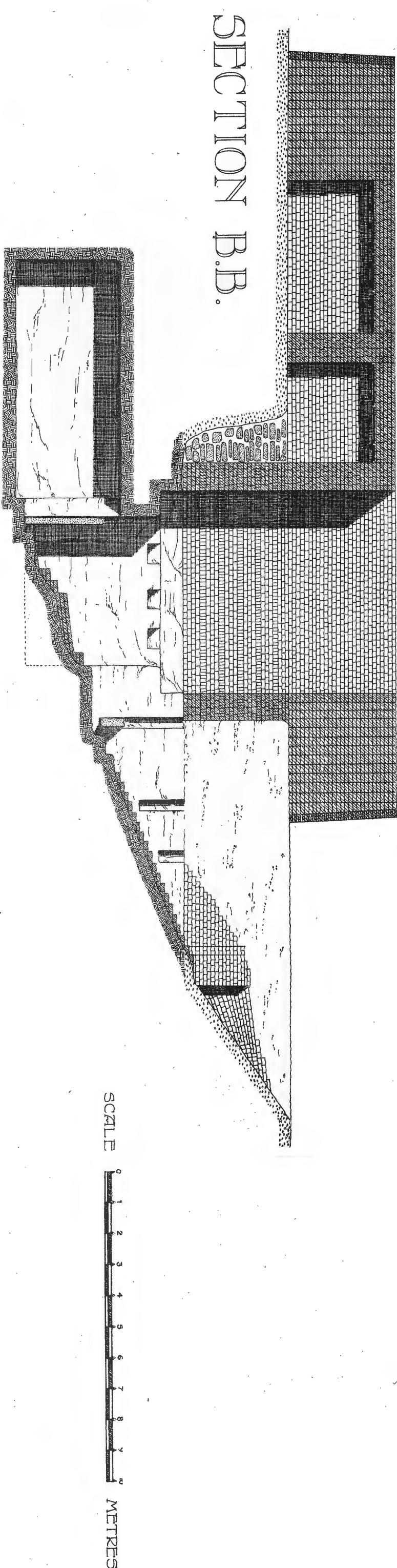


THE TOMB OF HEMAKHT

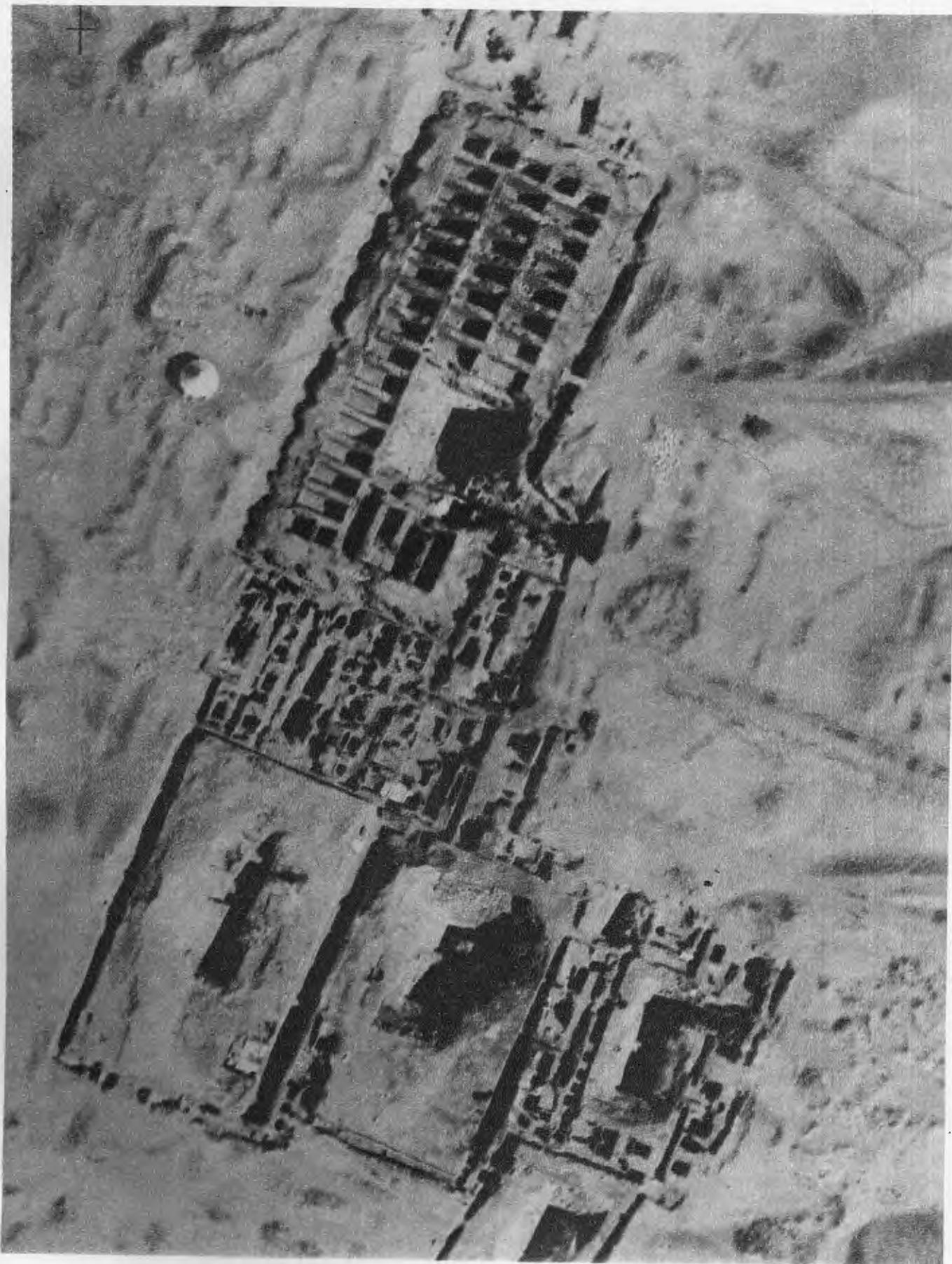
SECTION K.A.



REFERENCE
BRICK
STONE
WOOD
ROCK
GRAVEL



SCALE
8 METRES



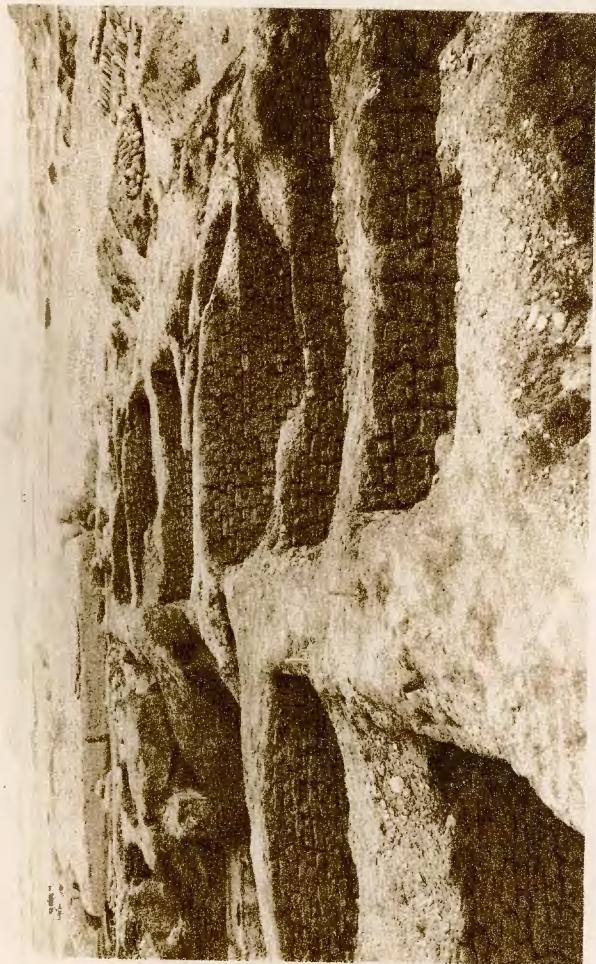
VIEW OF THE TOMB FROM THE AIR.
TAKEN BY THE ROYAL EGYPTIAN ARMY AIR FORCE.



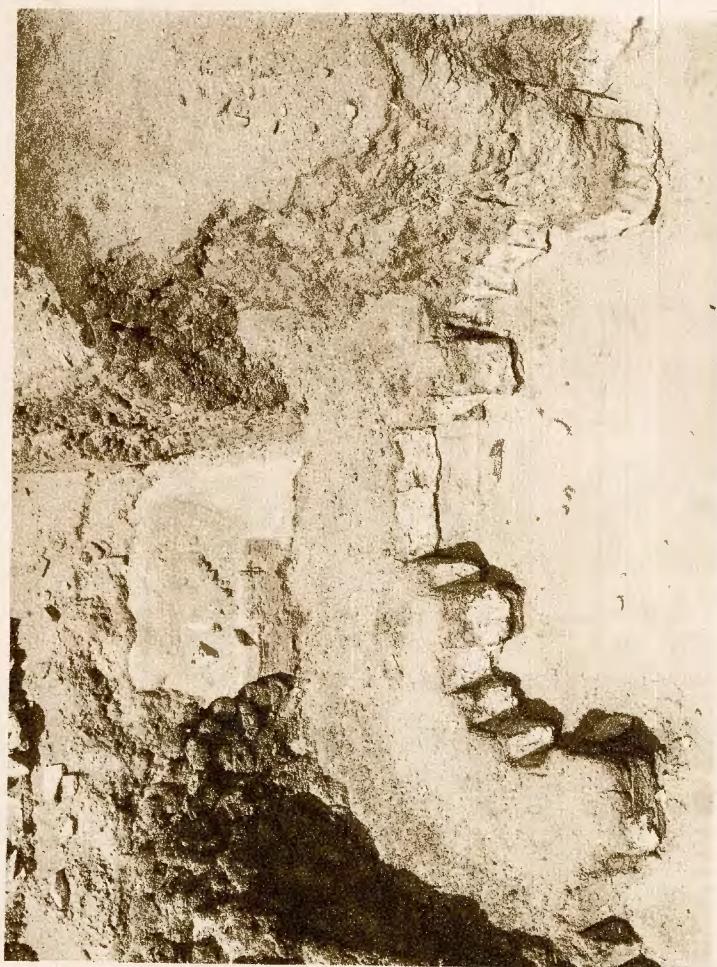
B. GENERAL VIEW OF THE PIT AND STAIRWAY.



D. THE EAST FAÇADE OF THE SUPERSTRUCTURE.



A. GENERAL VIEW OF THE MAGAZINES IN THE SUPERSTRUCTURE.



C. FOUNDATIONS OF A FALSE DOOR.



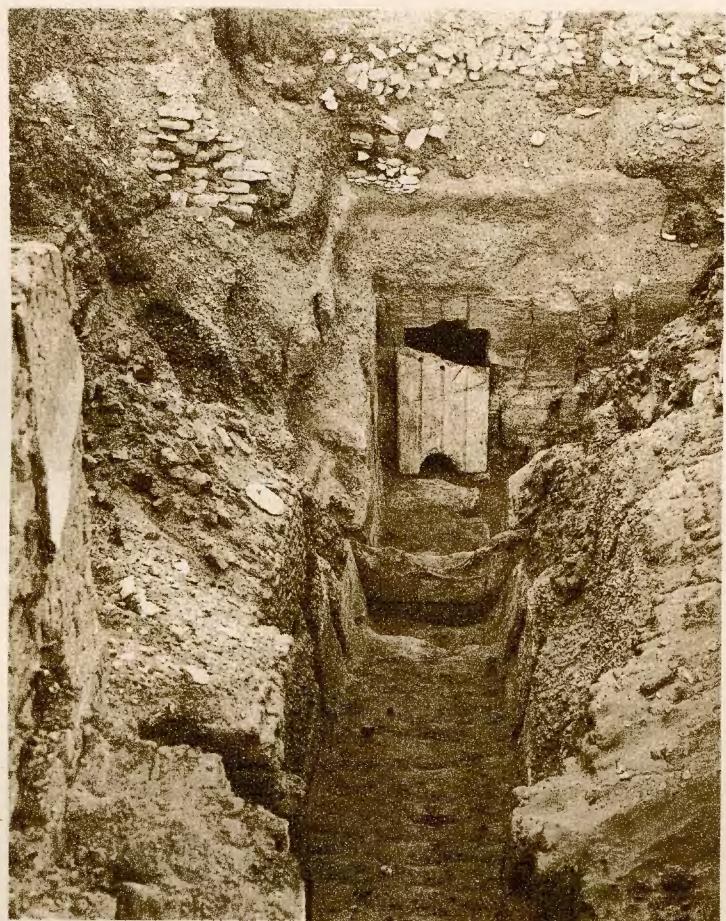
A. VIEW OF THE PIT FROM THE NORTH.



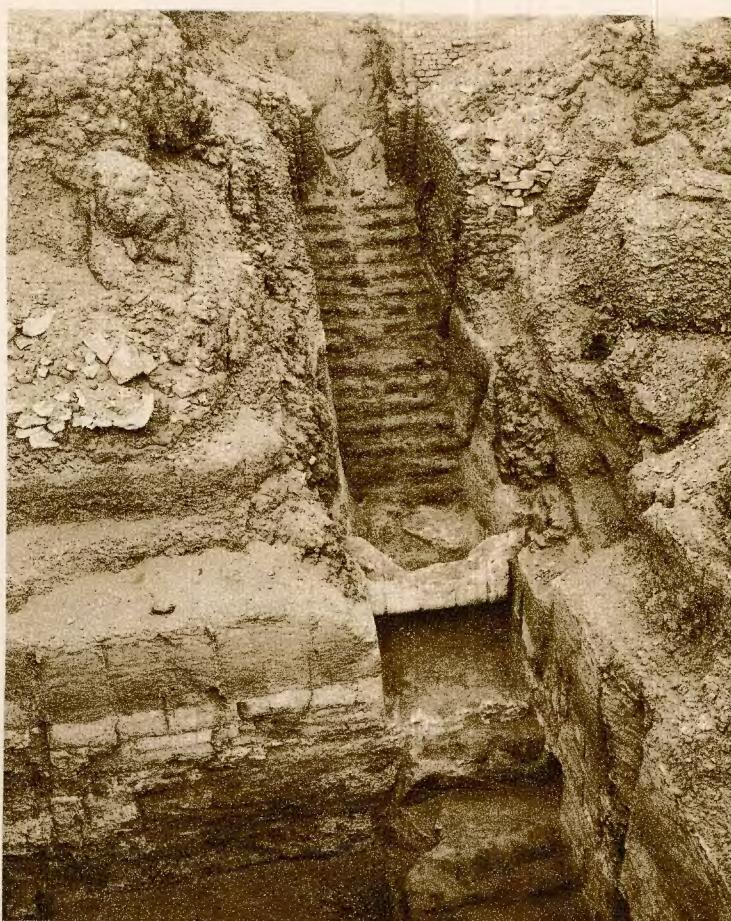
C. VIEW OF THE PIT FROM THE SOUTH.



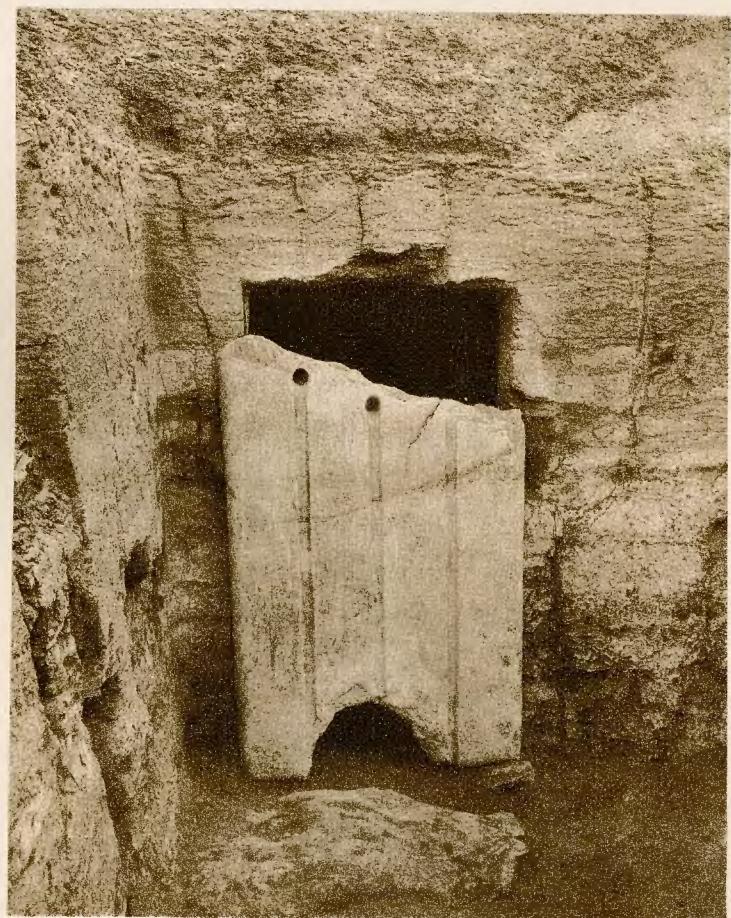
D. STONE BLOCKS IN THE PIT.



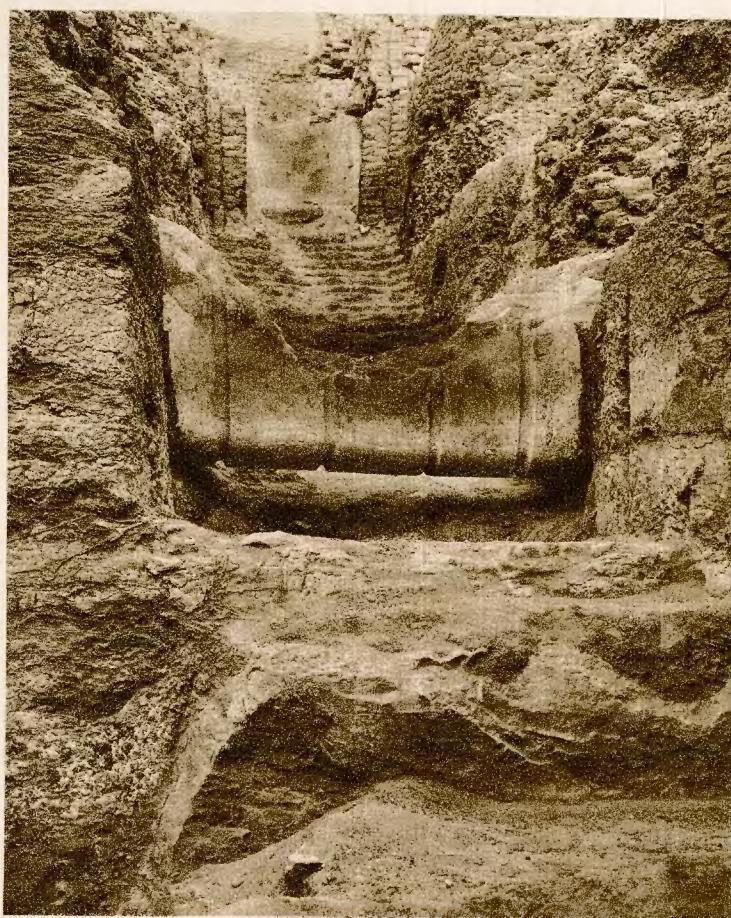
A. ENTRANCE STAIRWAY LOOKING DOWN.



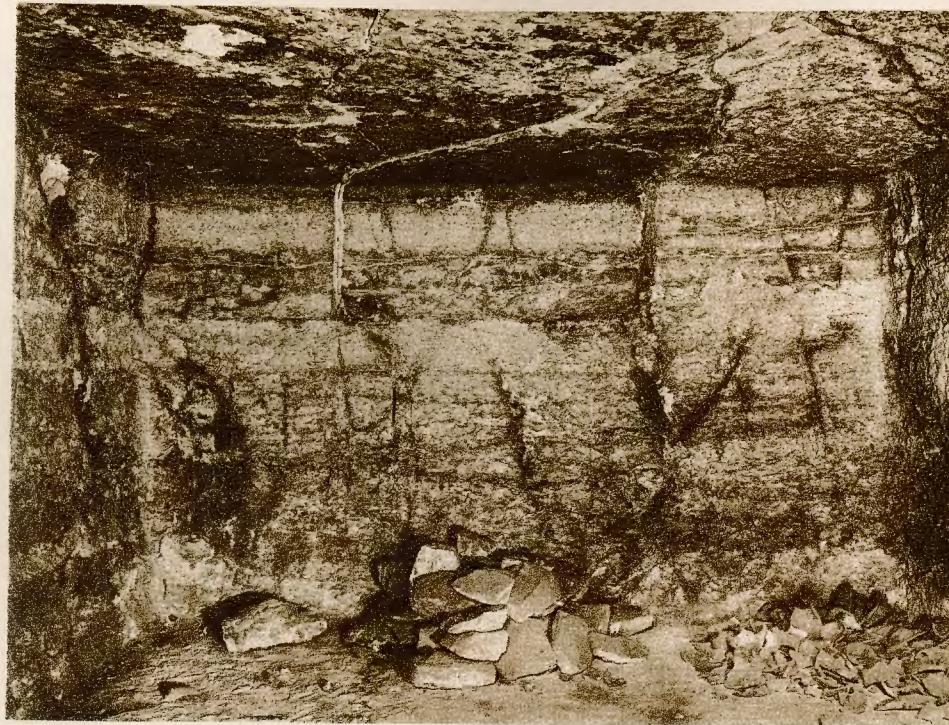
B. ENTRANCE STAIRWAY LOOKING UP.



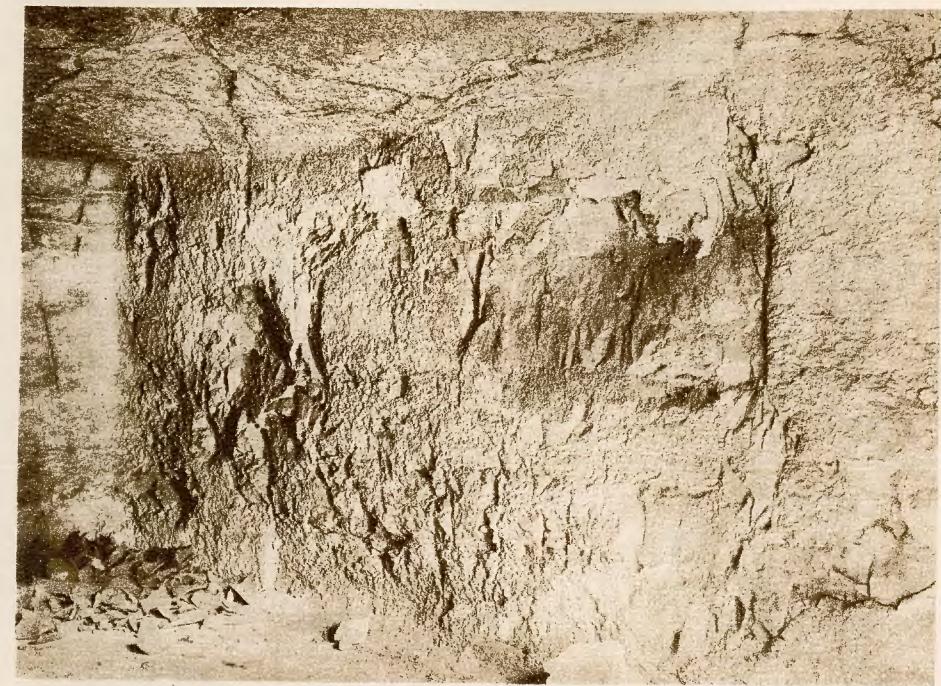
C. PORTCULLIS BLOCKING ENTRANCE TO BURIAL CHAMBER.



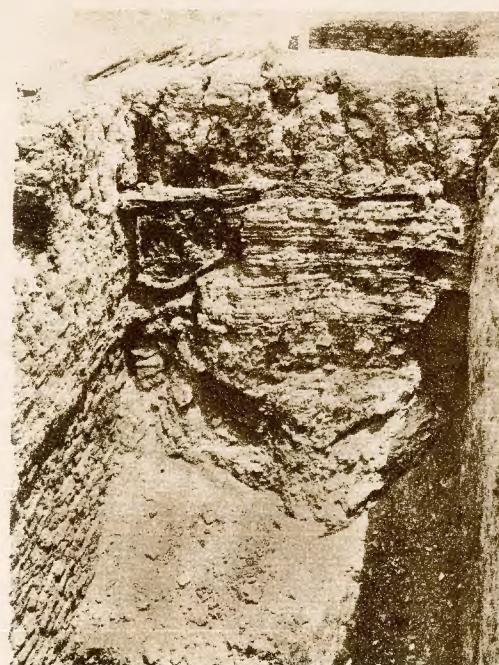
D. PORTCULLIS BLOCKING OF STAIRWAY.



A. INTERIOR OF THE BURIAL CHAMBER.



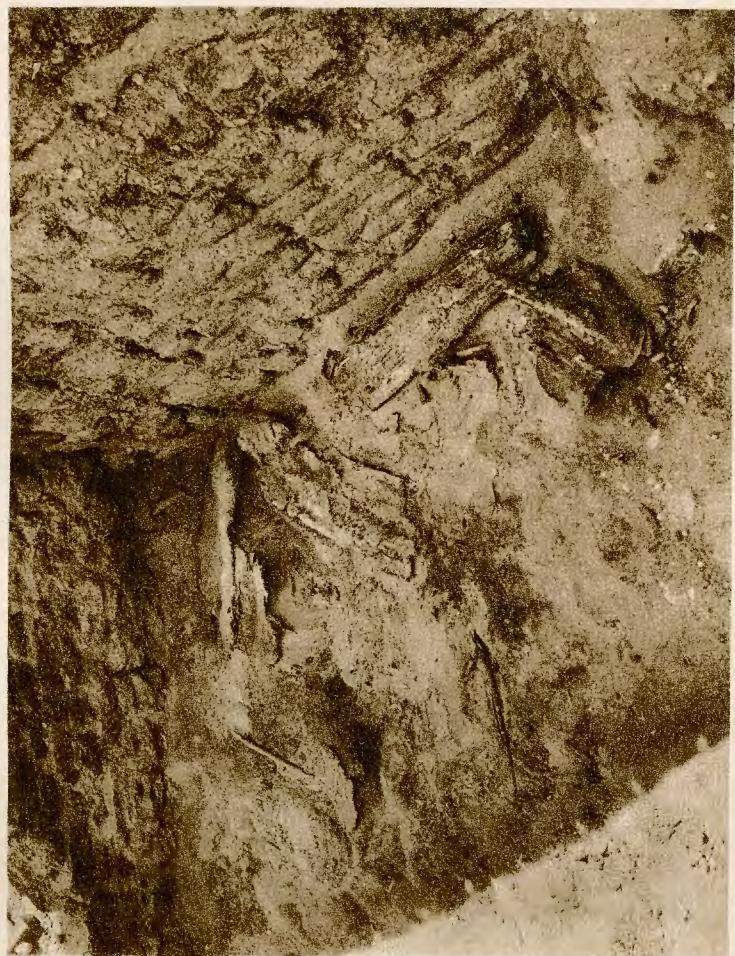
B. INTERIOR OF THE BURIAL CHAMBER.



C. EVIDENCE OF MAGAZINE ROOFING.



D. FLINT IMPLEMENTS IN MAGAZINE CO.



OBJECTS IN MAGAZINE Z.



A. OBJECTS IN MAGAZINE AA.



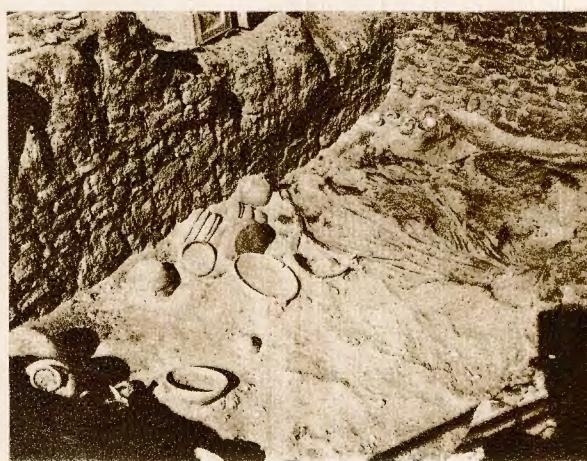
B. COIL OF ROPE IN MAGAZINE AA.



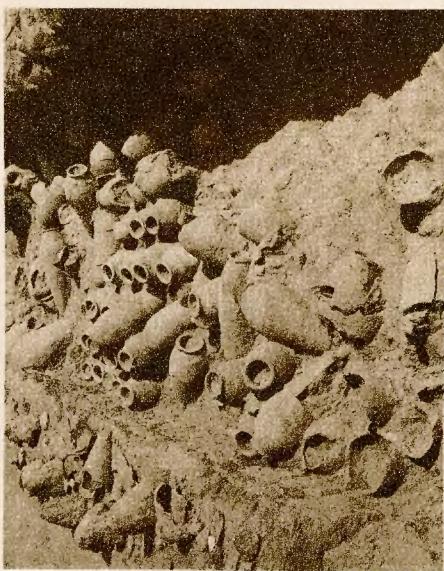
C. LEATHER BAG IN MAGAZINE AA.



D. POTTERY IN MAGAZINE Y.



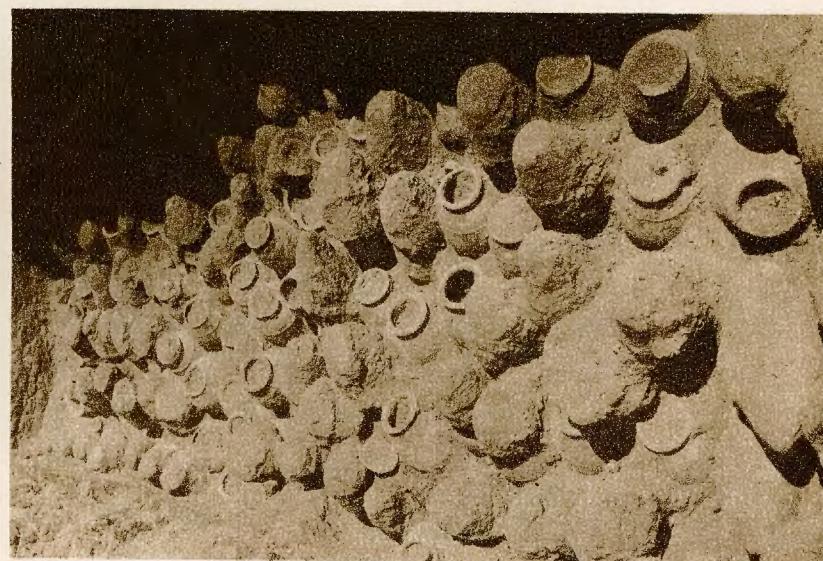
E. POTTERY IN MAGAZINE Y.



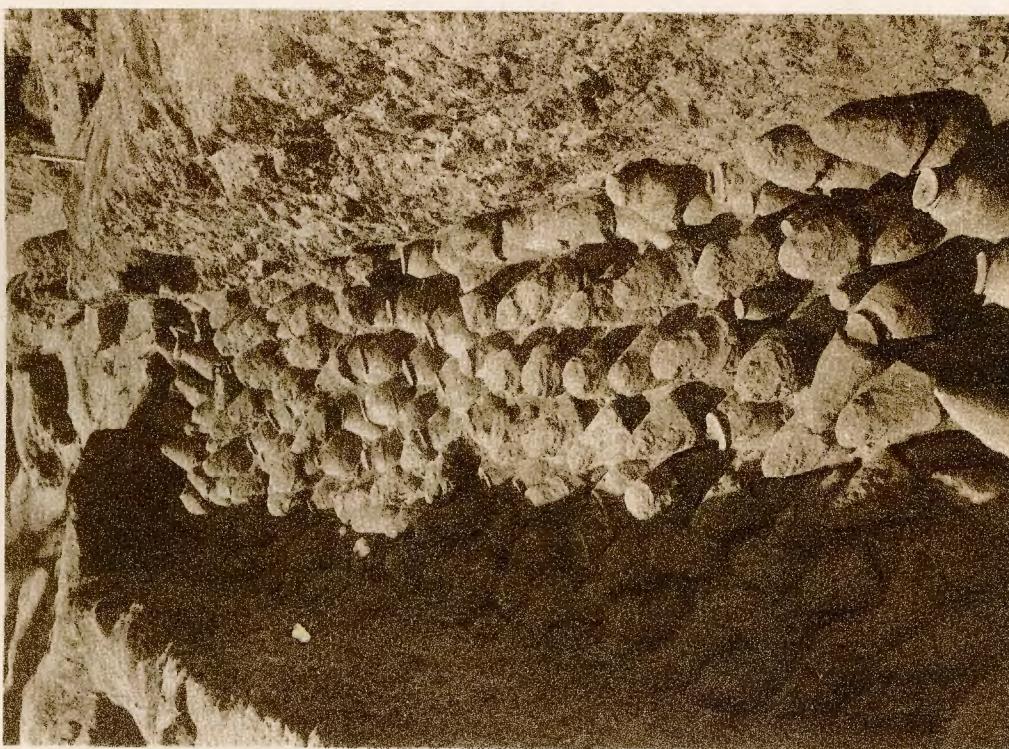
C. POTTERY IN MAGAZINE E.



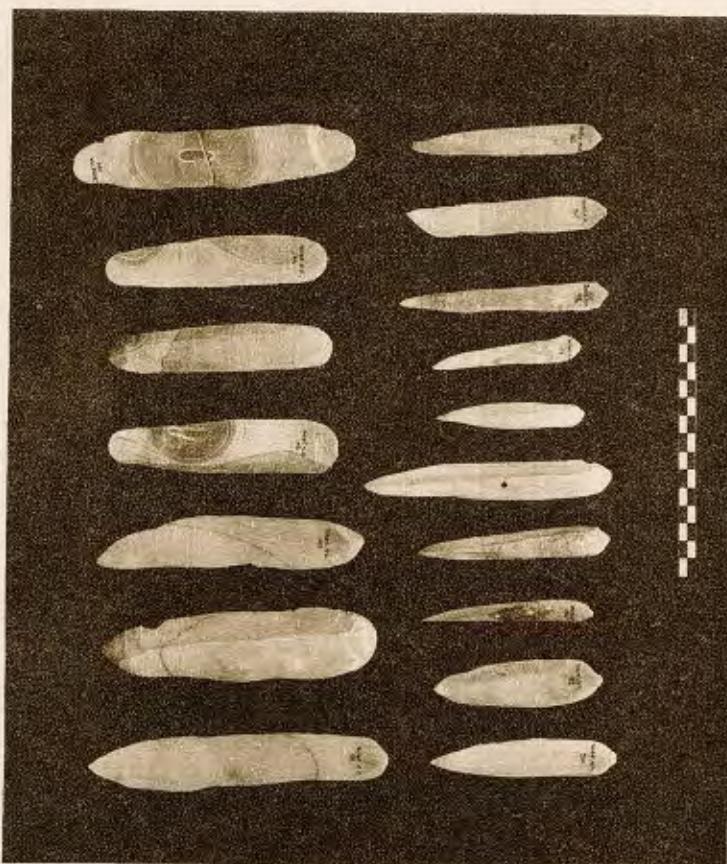
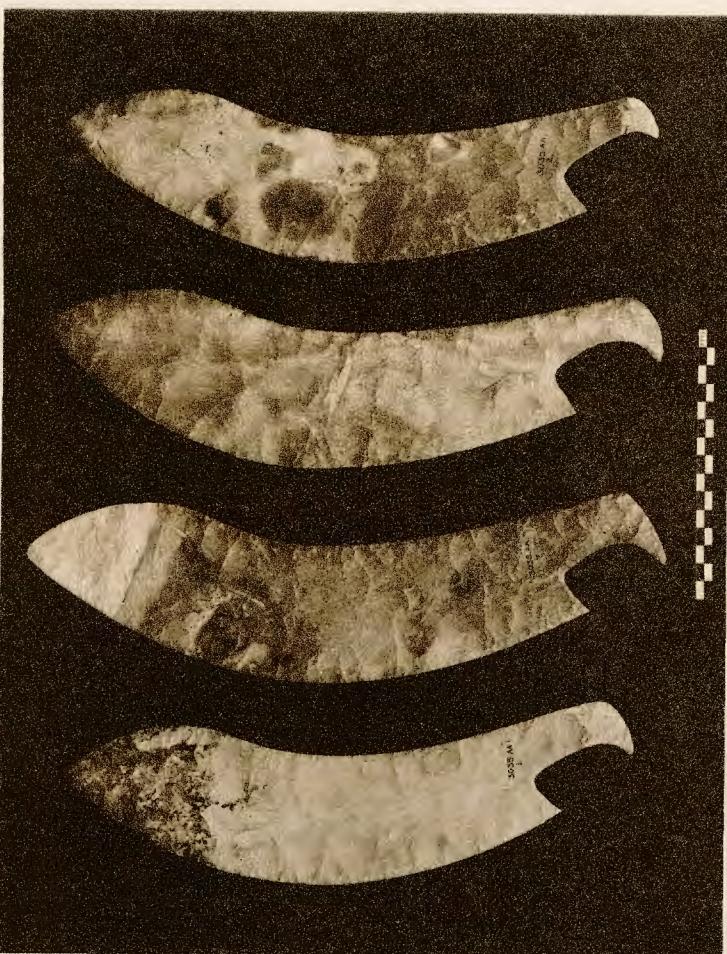
D. POTTERY IN MAGAZINE F.



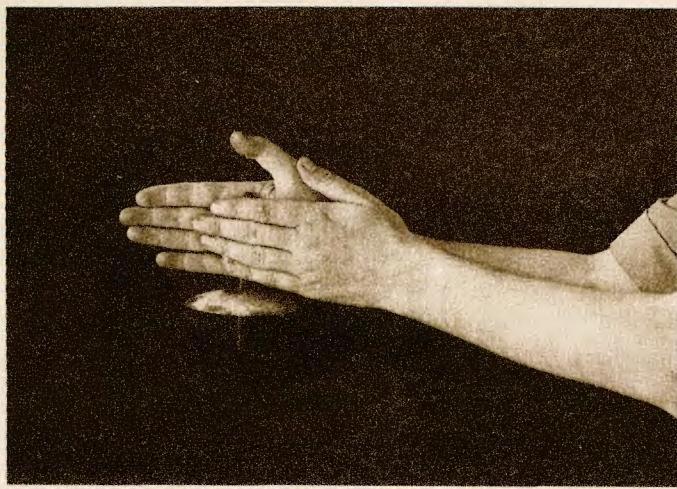
B. POTTERY IN MAGAZINE D.



A. POTTERY IN MAGAZINE C.



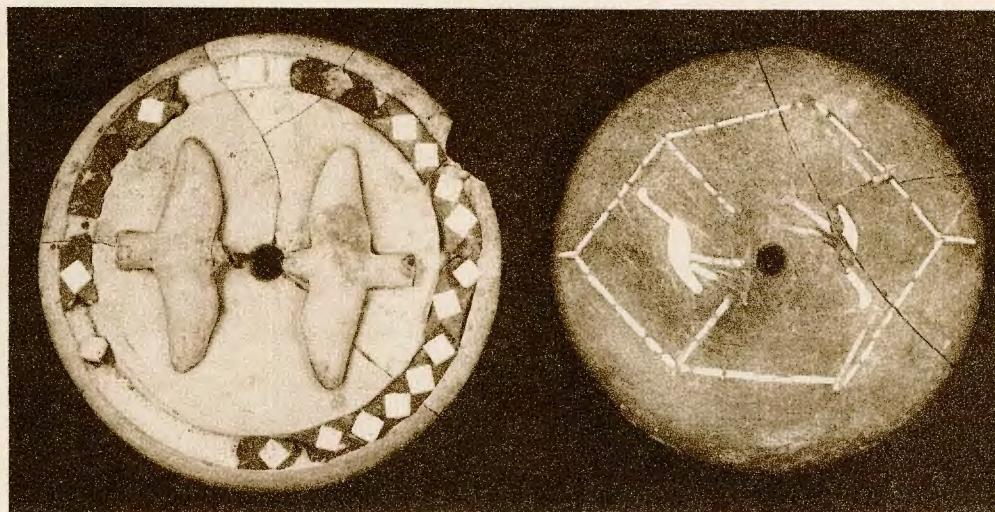
EXAMPLES OF FLINT IMPLEMENTS.



A. POSSIBLE METHOD OF PLAY.



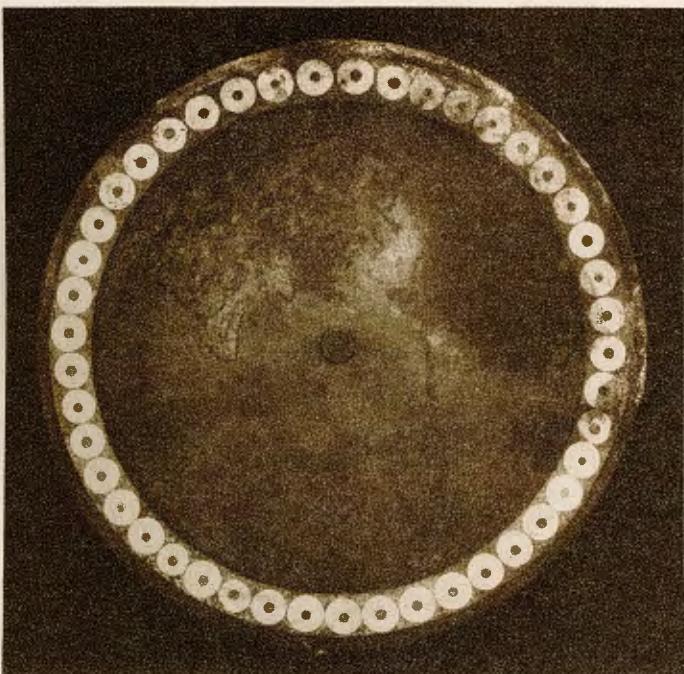
B. CAT. No. 307.



CAT. No. 309.

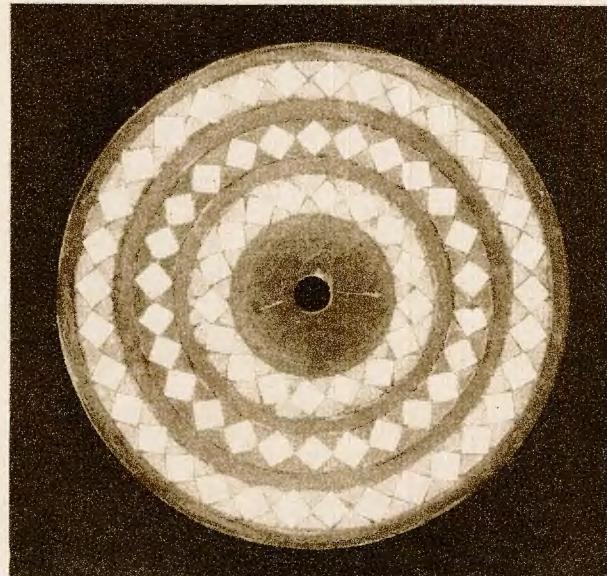
C.

CAT. No. 310.

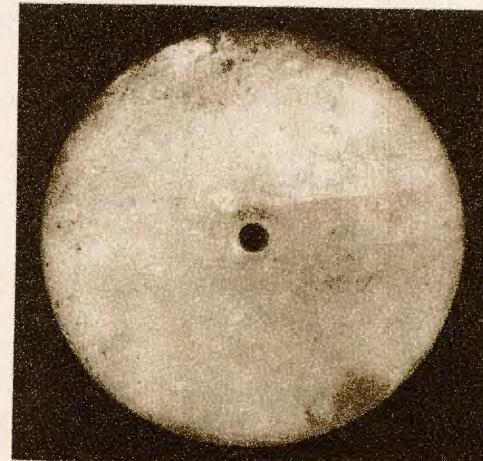
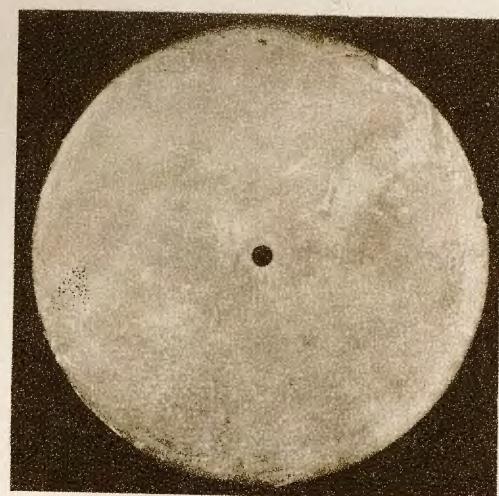
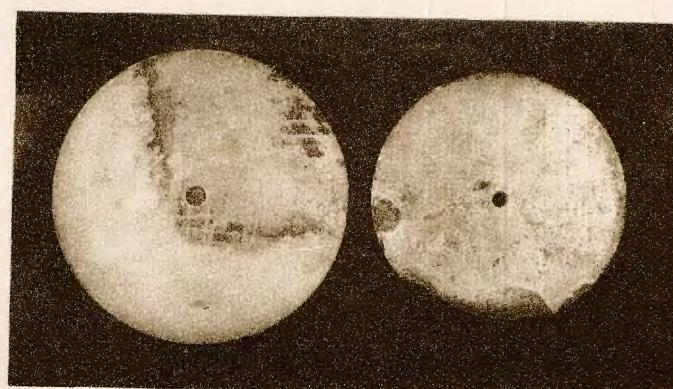
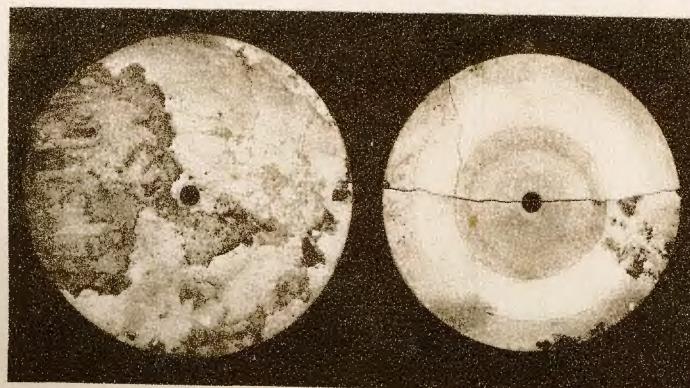
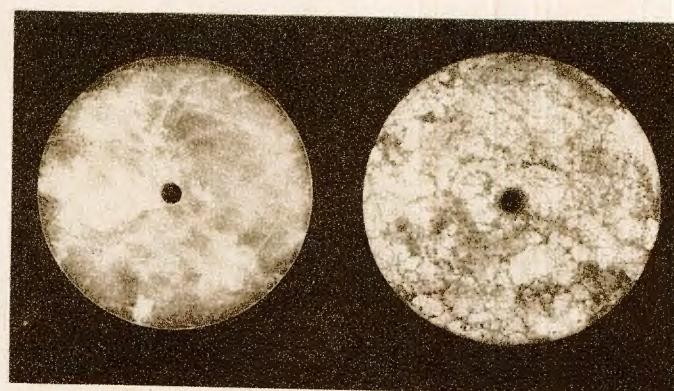
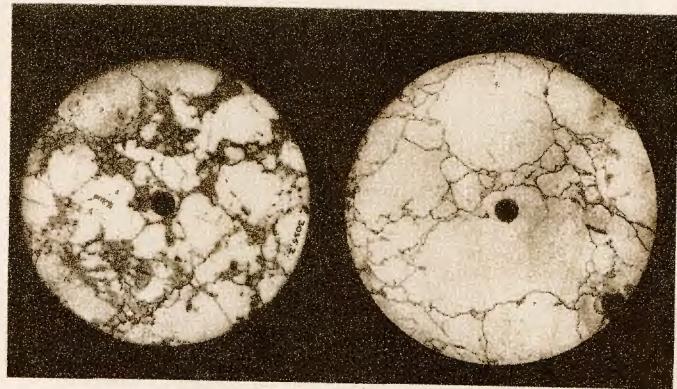
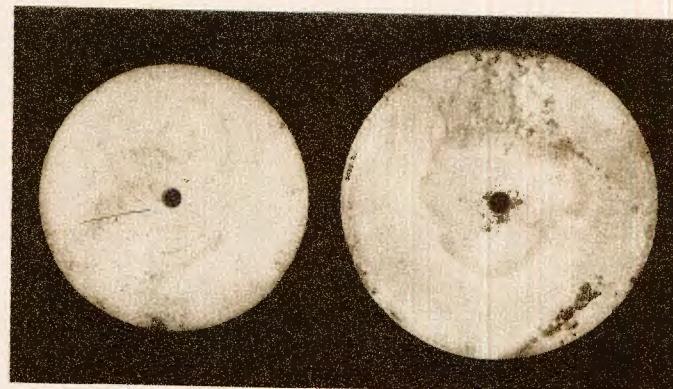
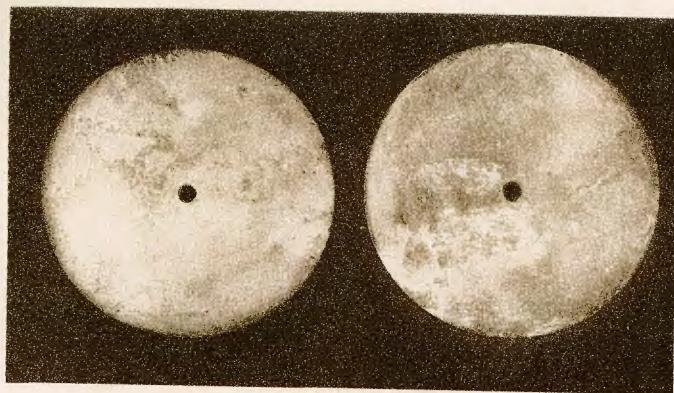


D. CAT. No. 306.

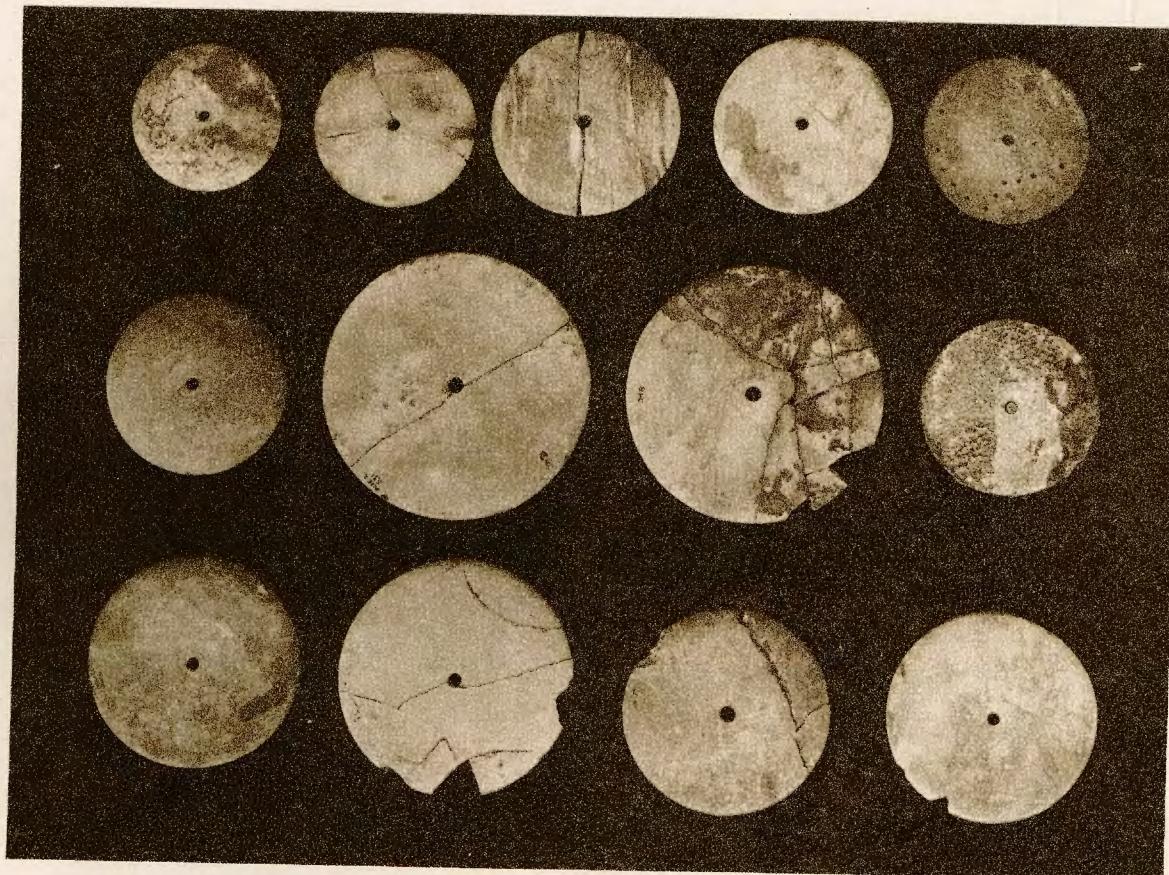
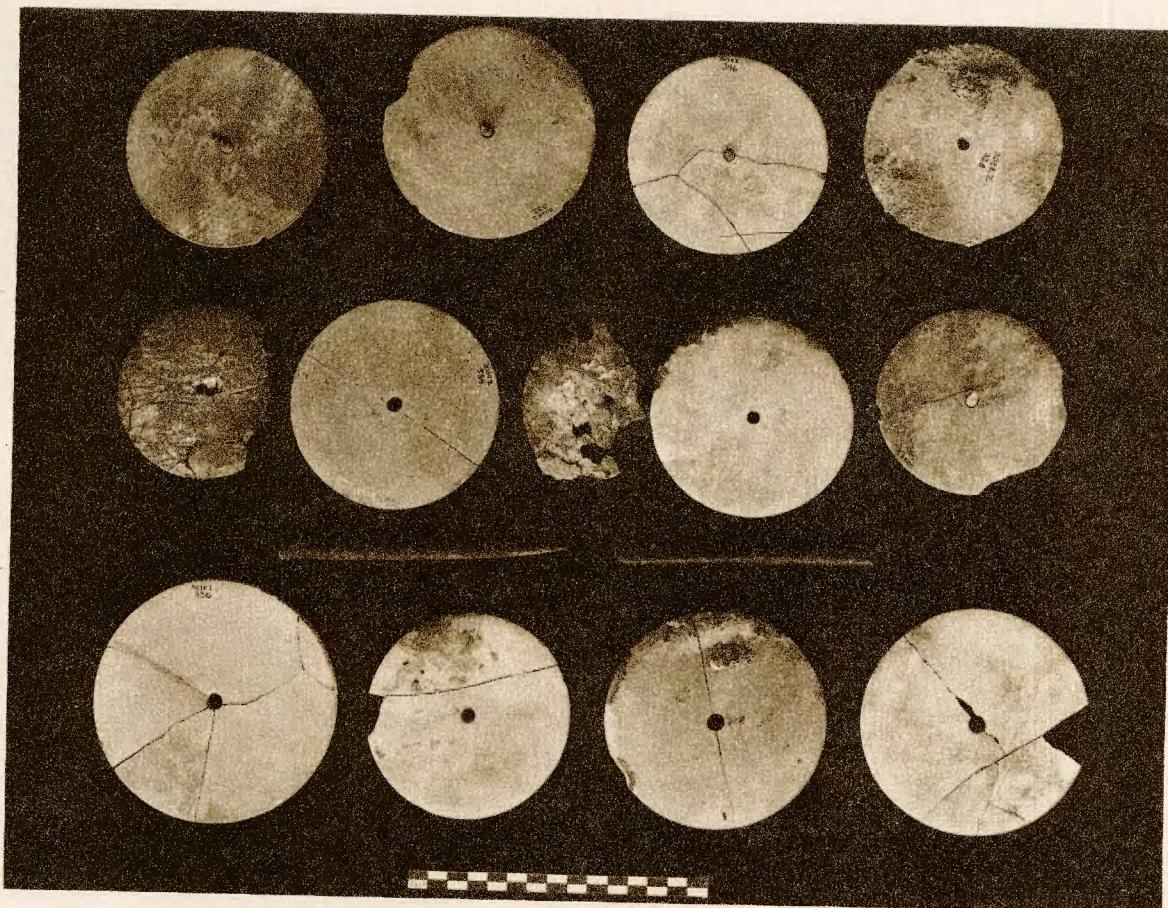
THE DISKS.



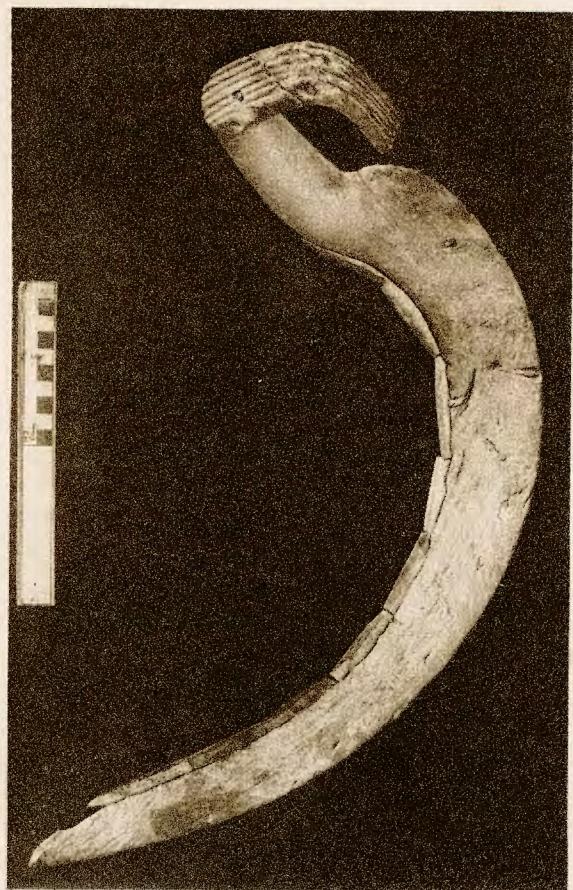
E. CAT. No. 308.



THE DISKS.



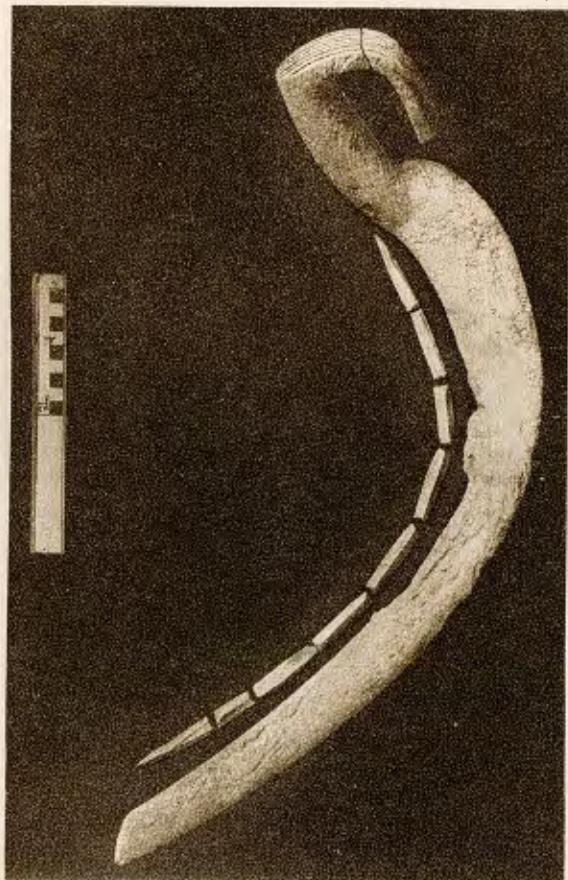
THE DISKS.



A. CAT. No. 356.
B. CAT. No. 357.



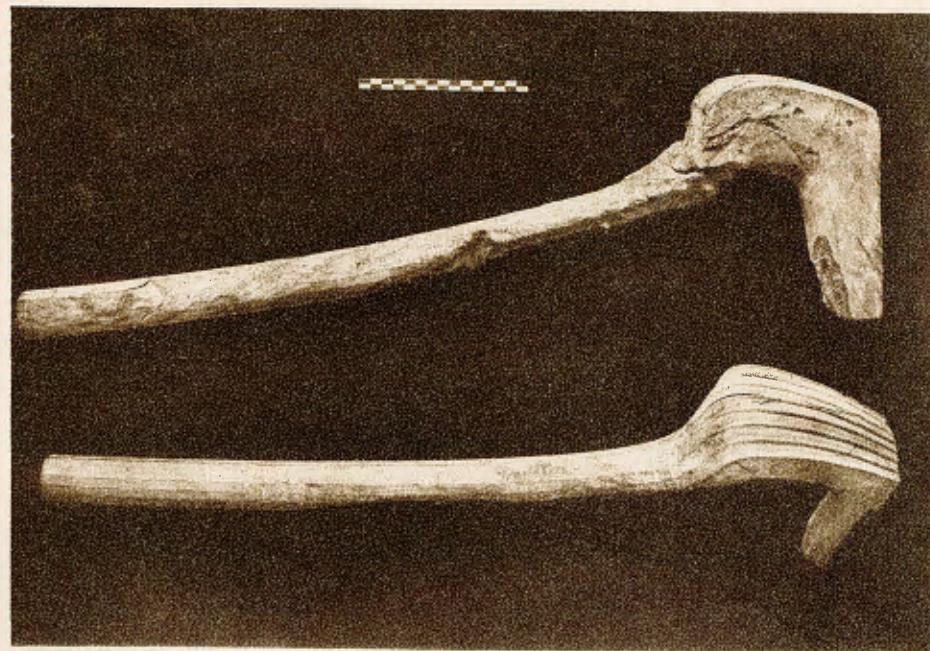
D. CAT. No. 359.



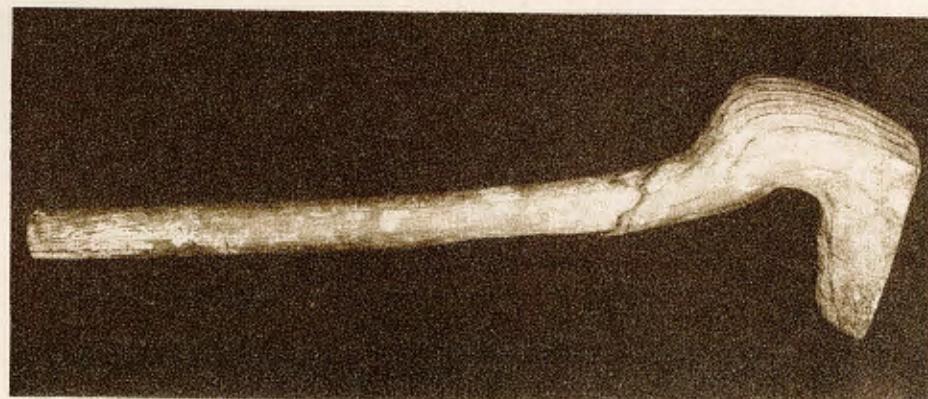
C. CAT. No. 393.



SICKLES.



A. CAT. Nos. 351 & 352.

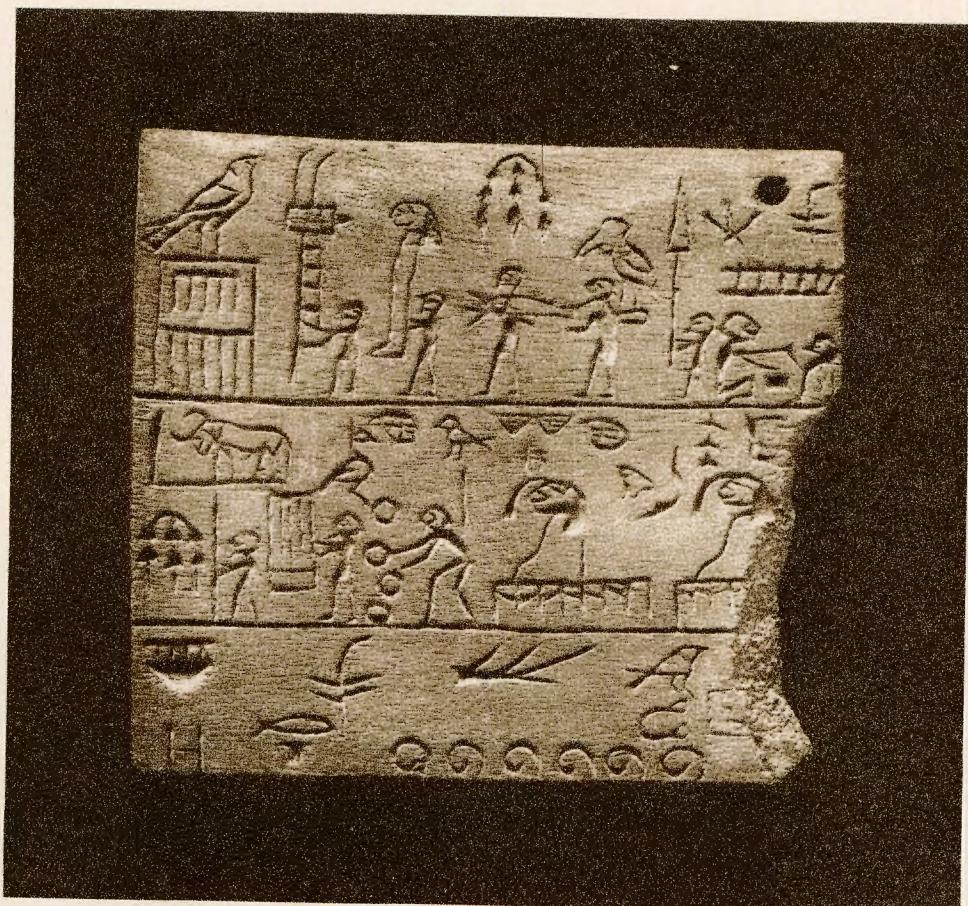


B. CAT. No. 353.

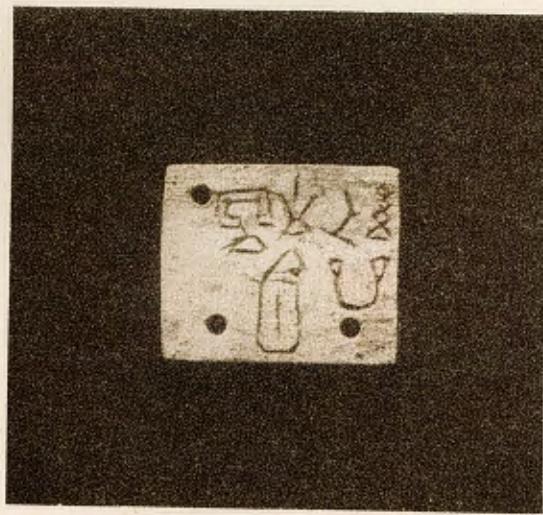


C. CAT. No. 354.

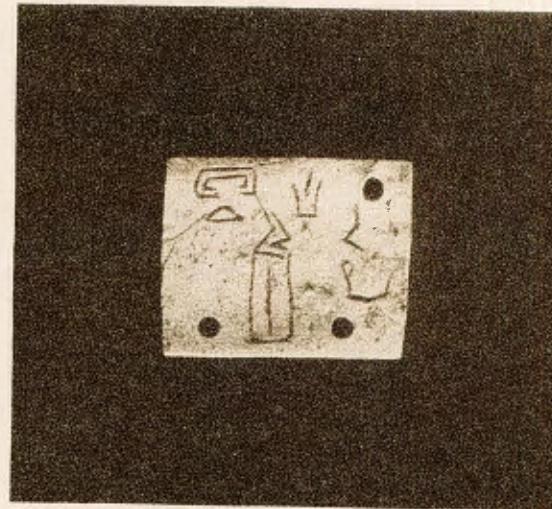
ADZE HANDLES.



A. CAT. No. 411.

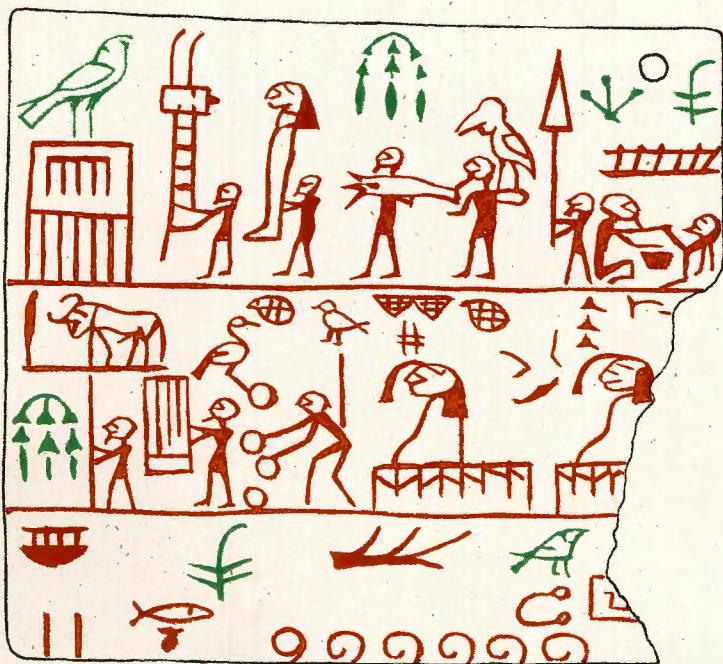


B. CAT. No. 412.

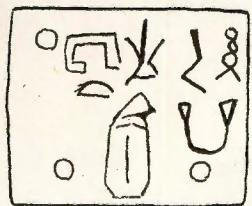


C. CAT. No. 413.

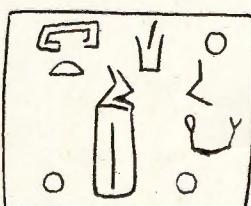
LABELS.



A. CAT. No. 411.

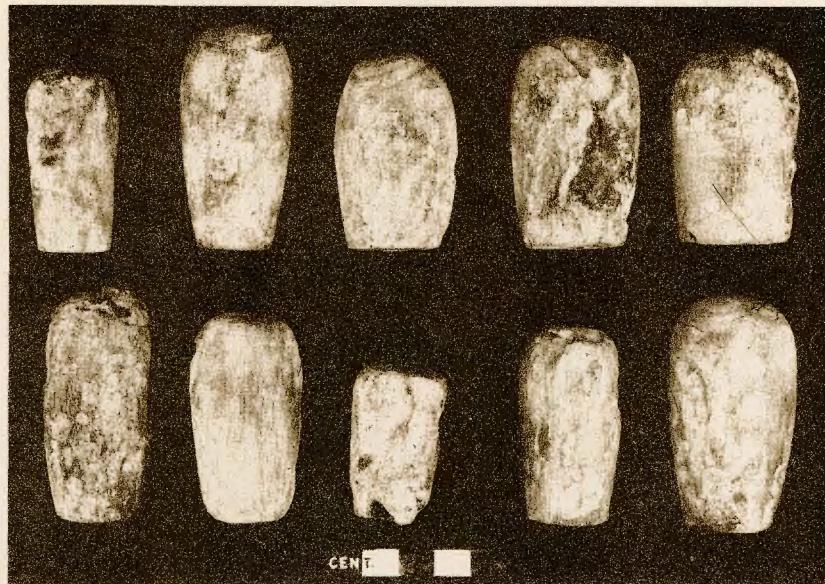


B. CAT. No. 412.

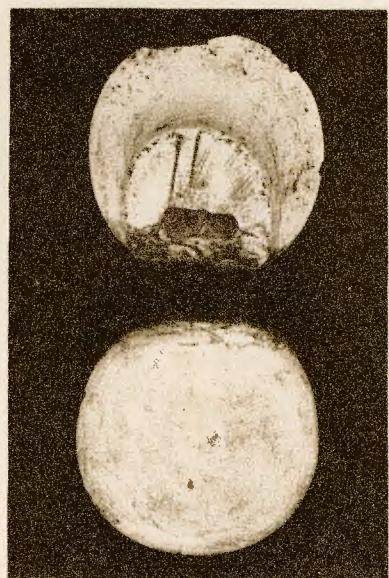


CAT. No. 413.

LABELS.



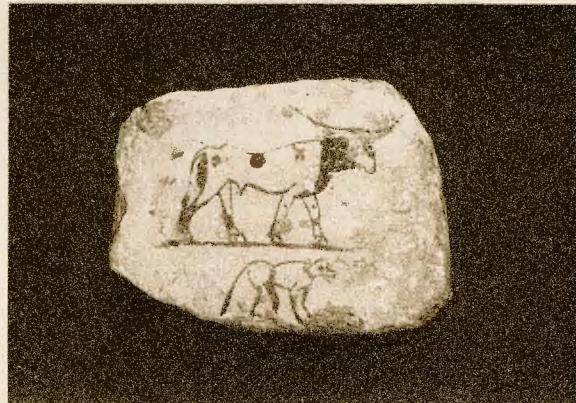
A. CAT. No. 426.



B. CAT. No. 456.



C. CAT. Nos. 423 & 422.

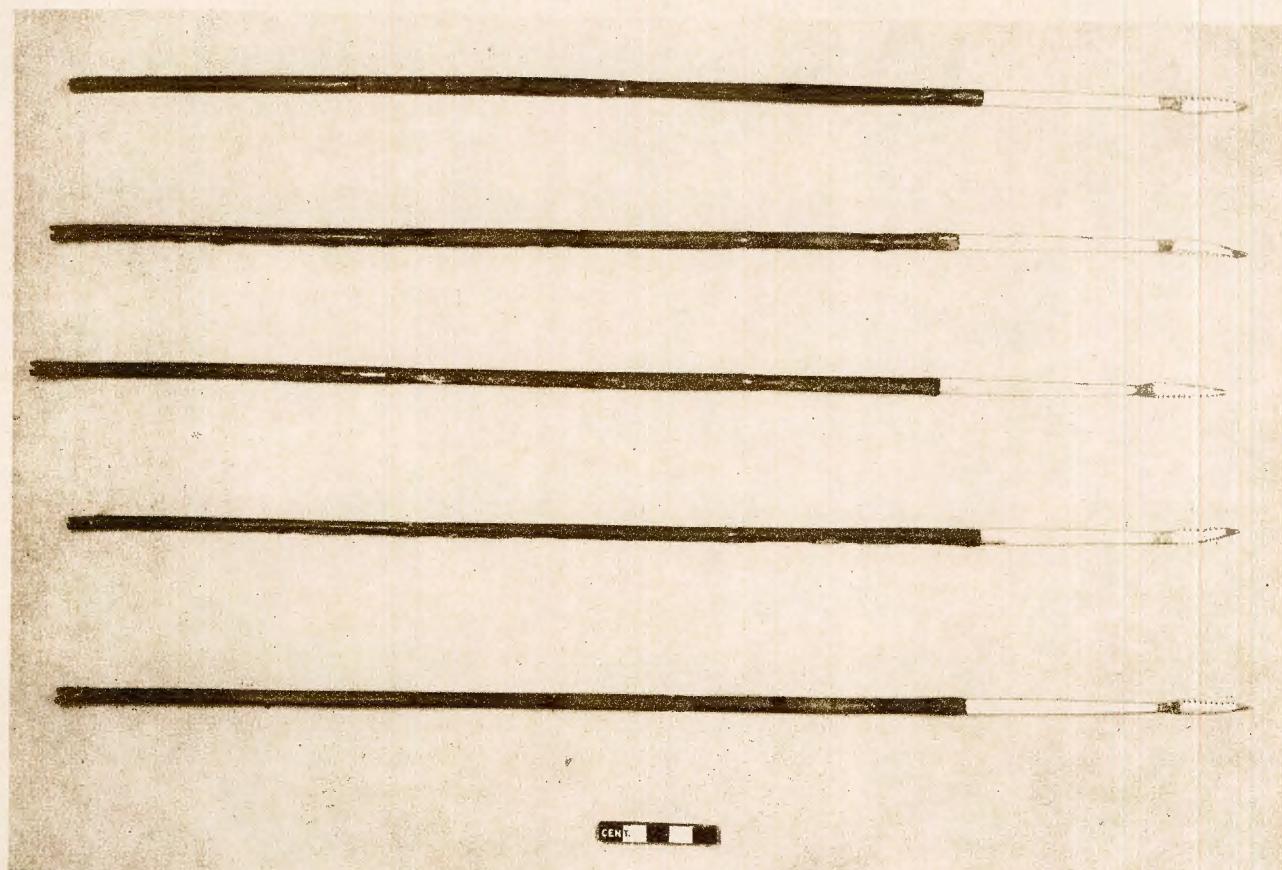


D. CAT. No. 431.

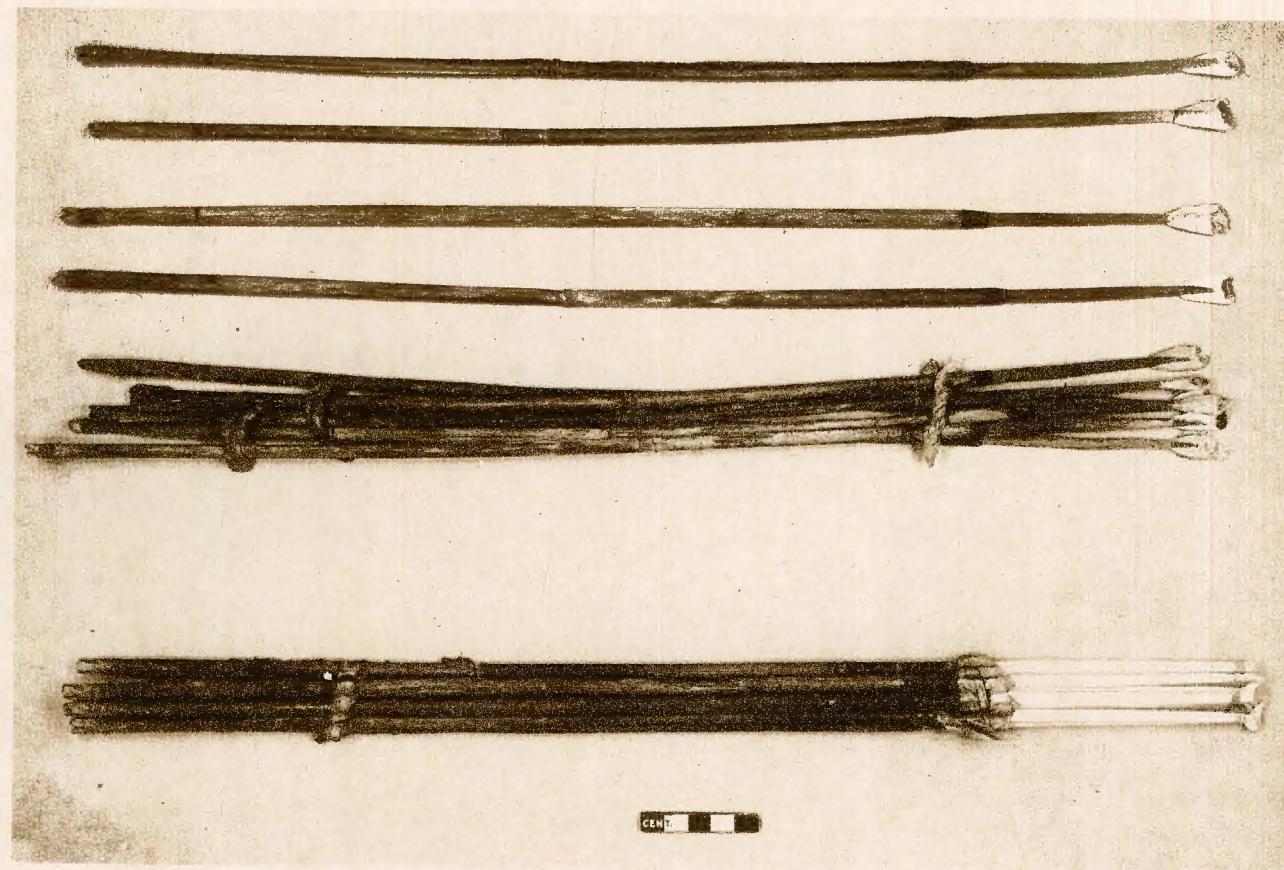


E. CAT. Nos. 430 & 421.

MISCELLANEOUS OBJECTS.

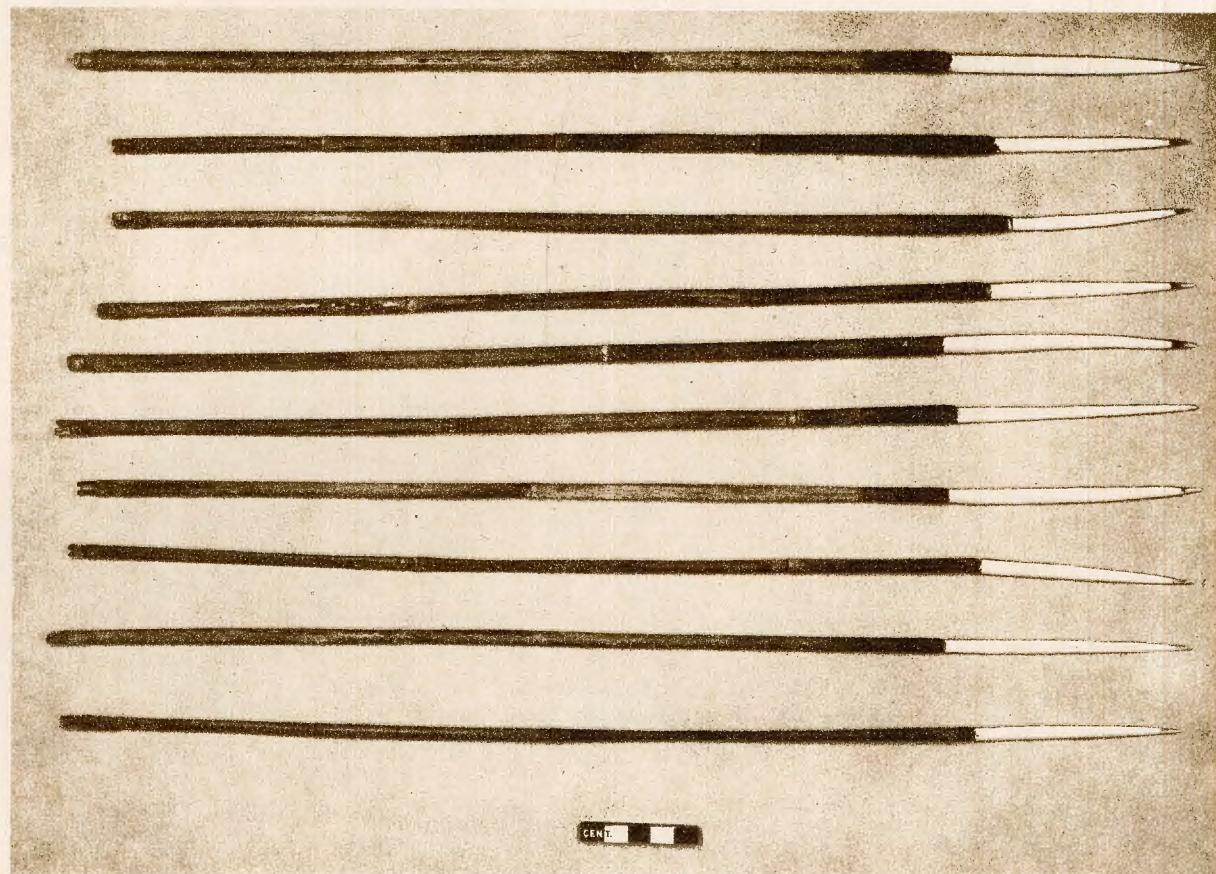
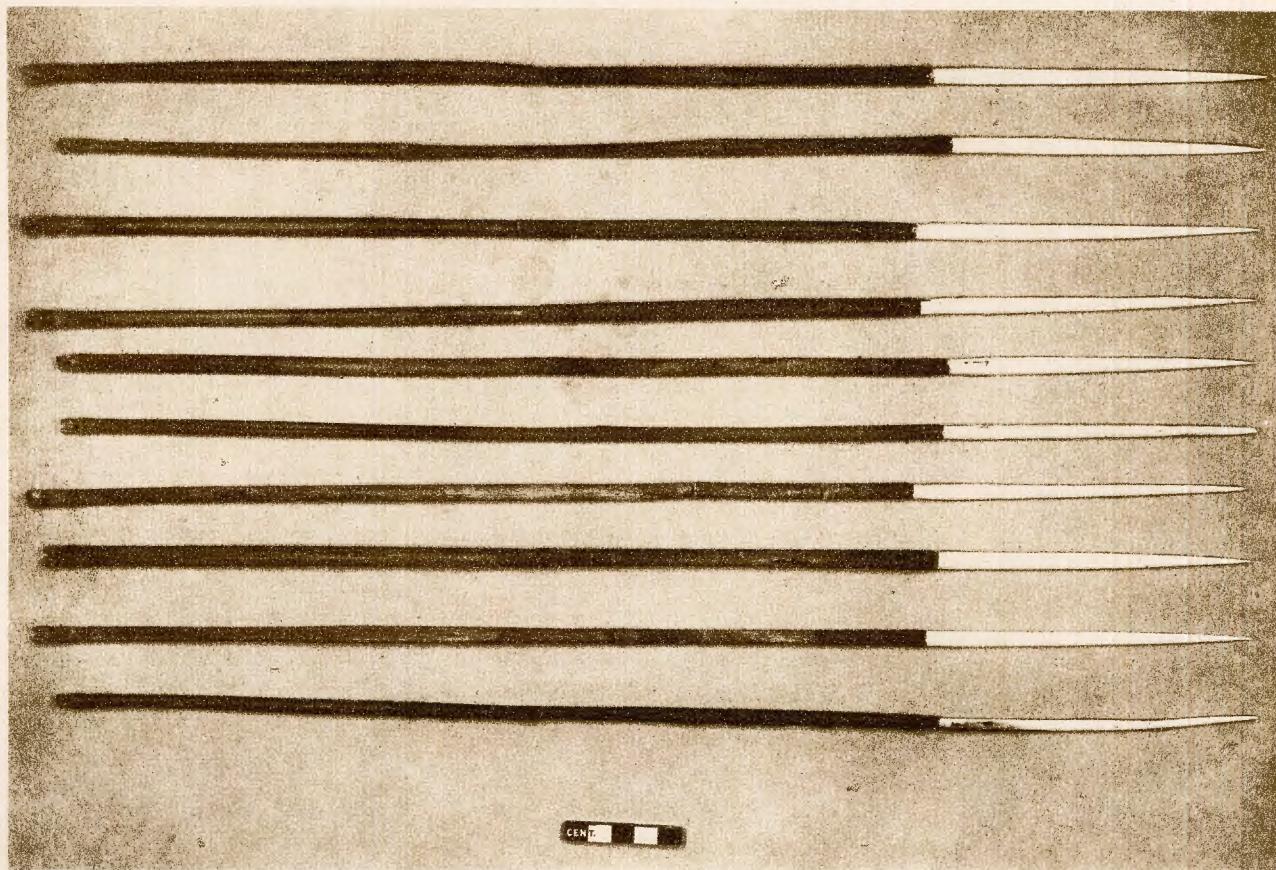


CENT.

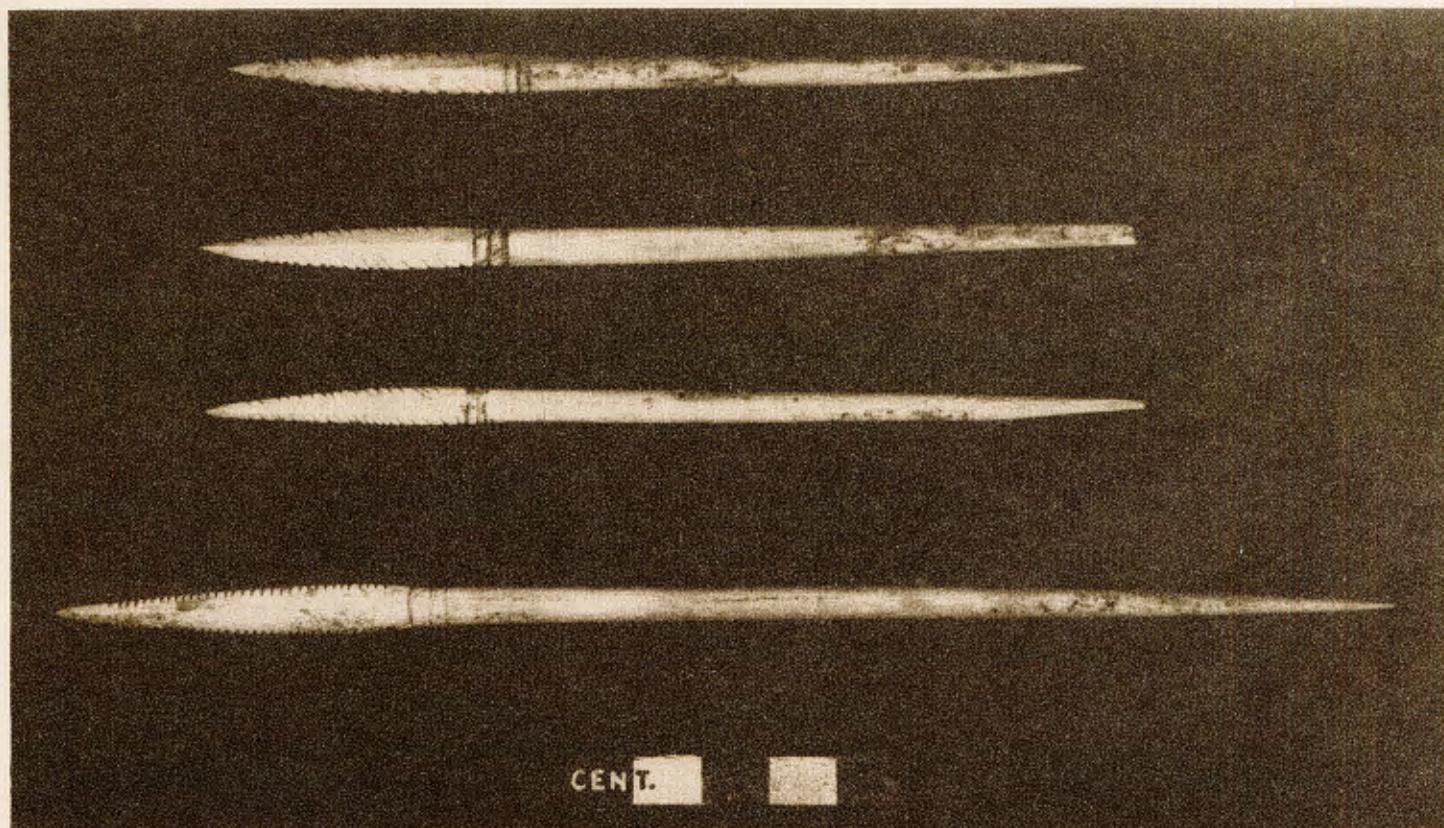


CENT.

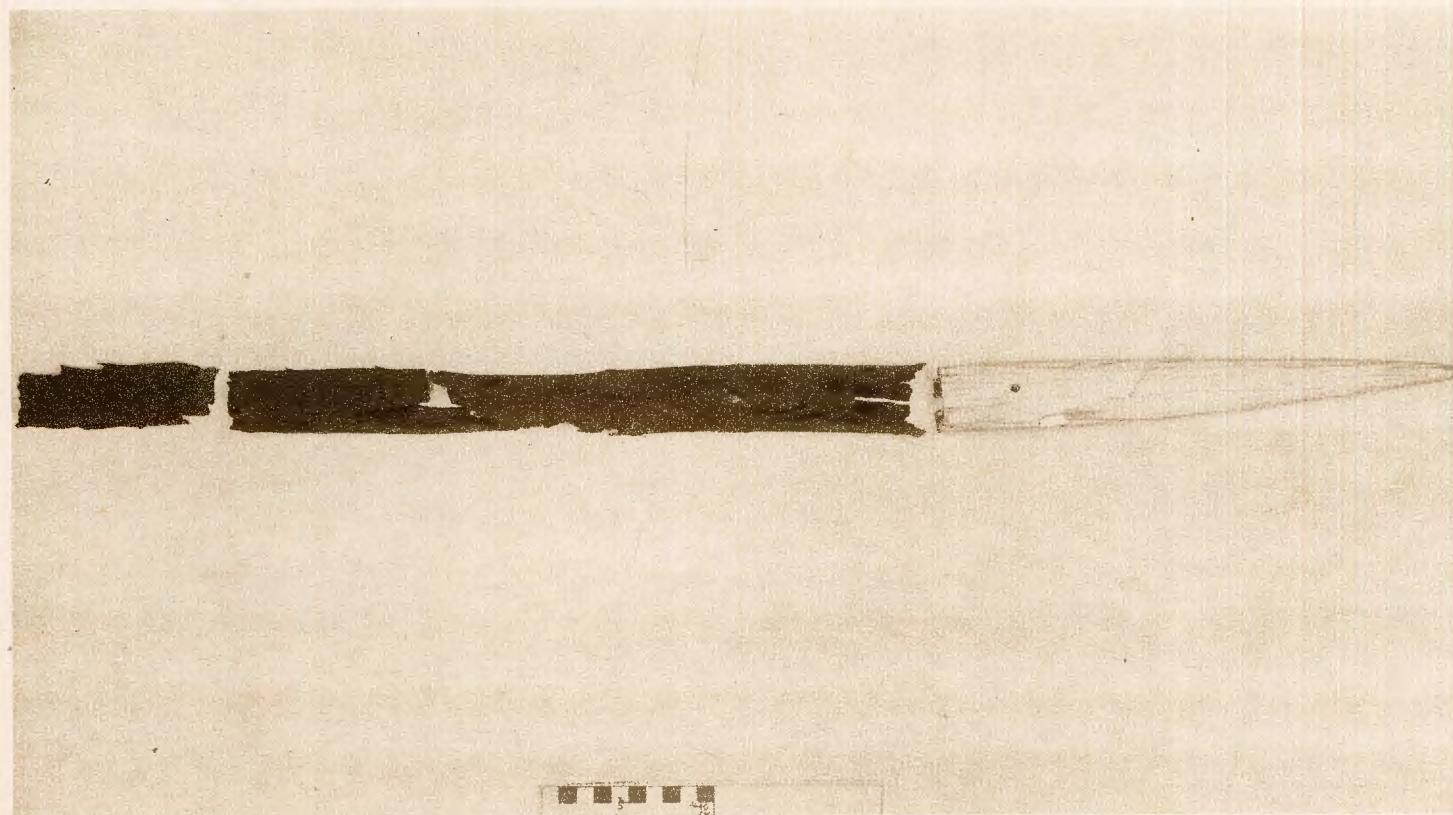
EXAMPLES OF ARROWS.



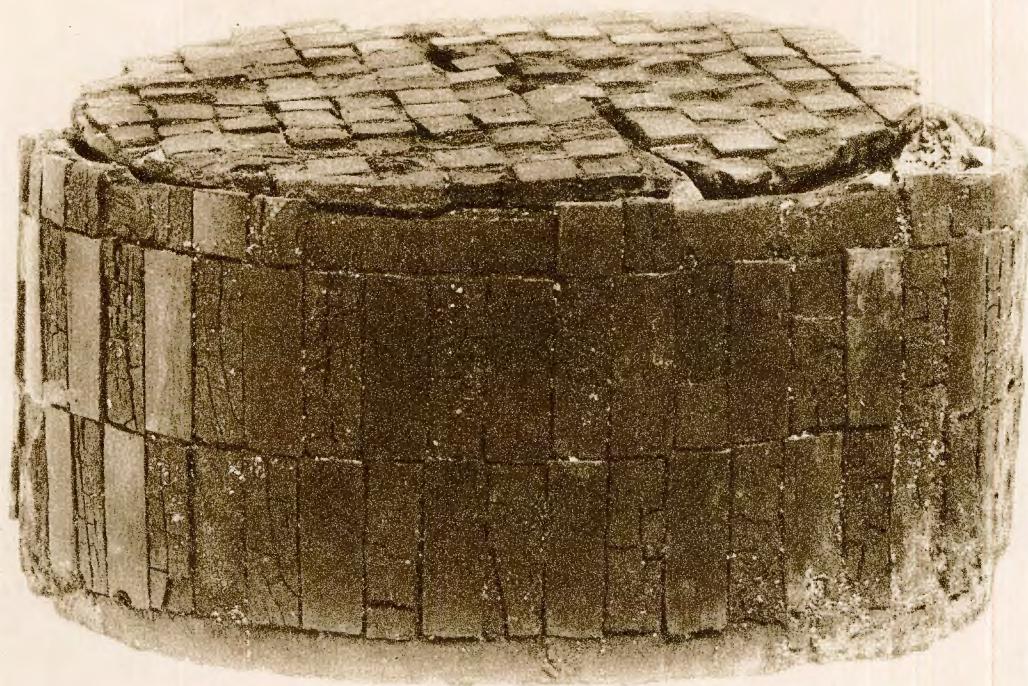
EXAMPLES OF ARROWS.



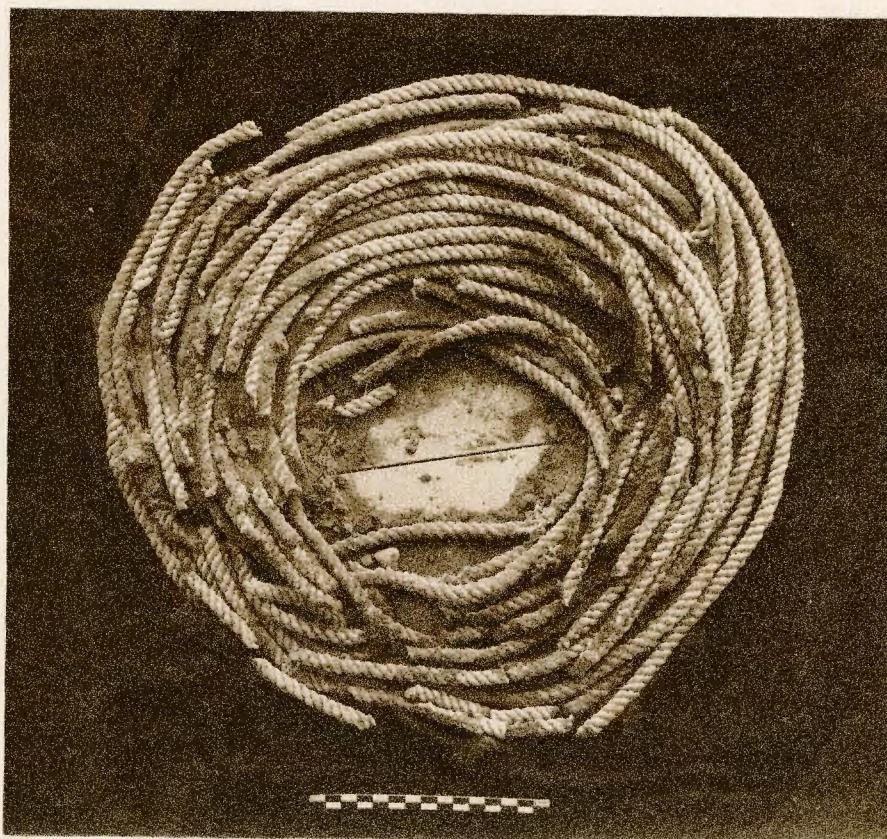
A. ARROW HEADS.



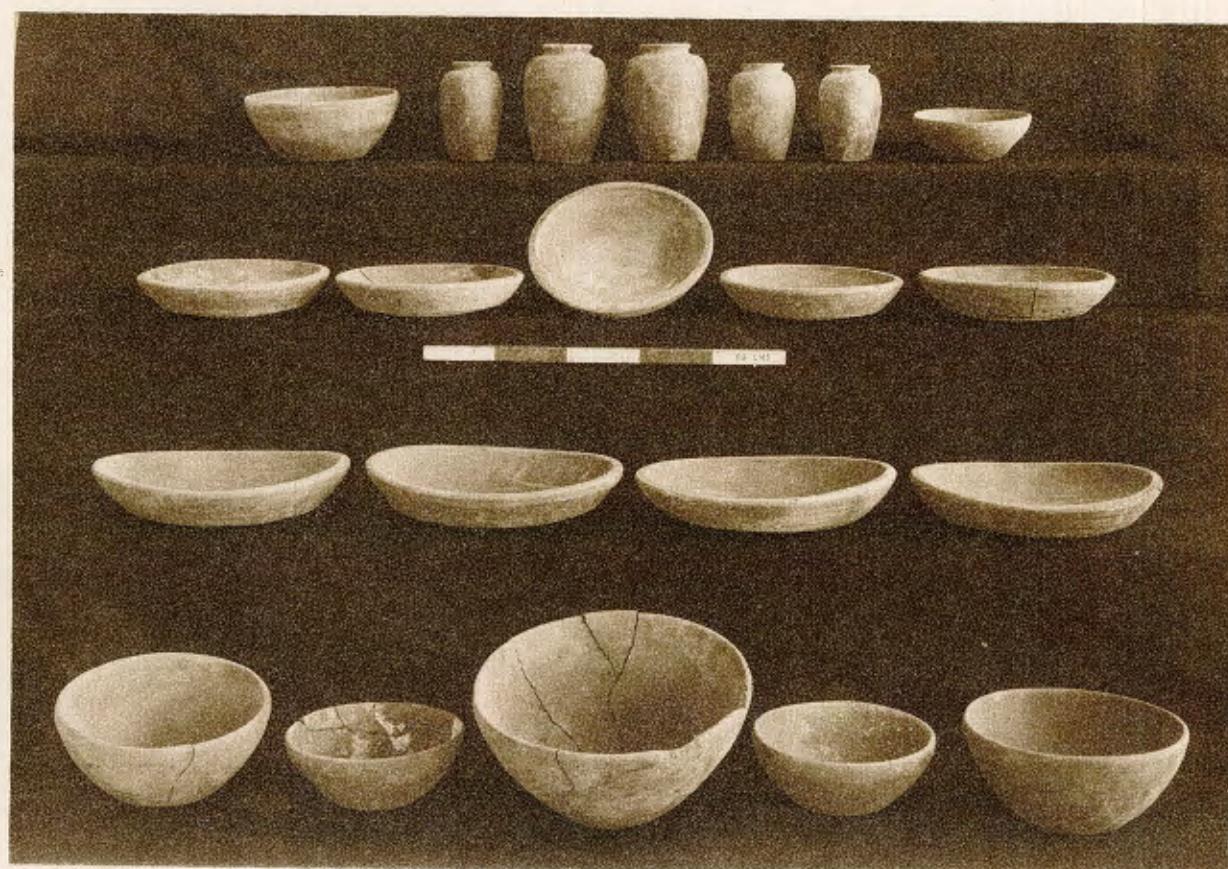
B. IVORY SPEAR HEAD.



A. INLAID WOODEN BOX.
CAT. No. 232.



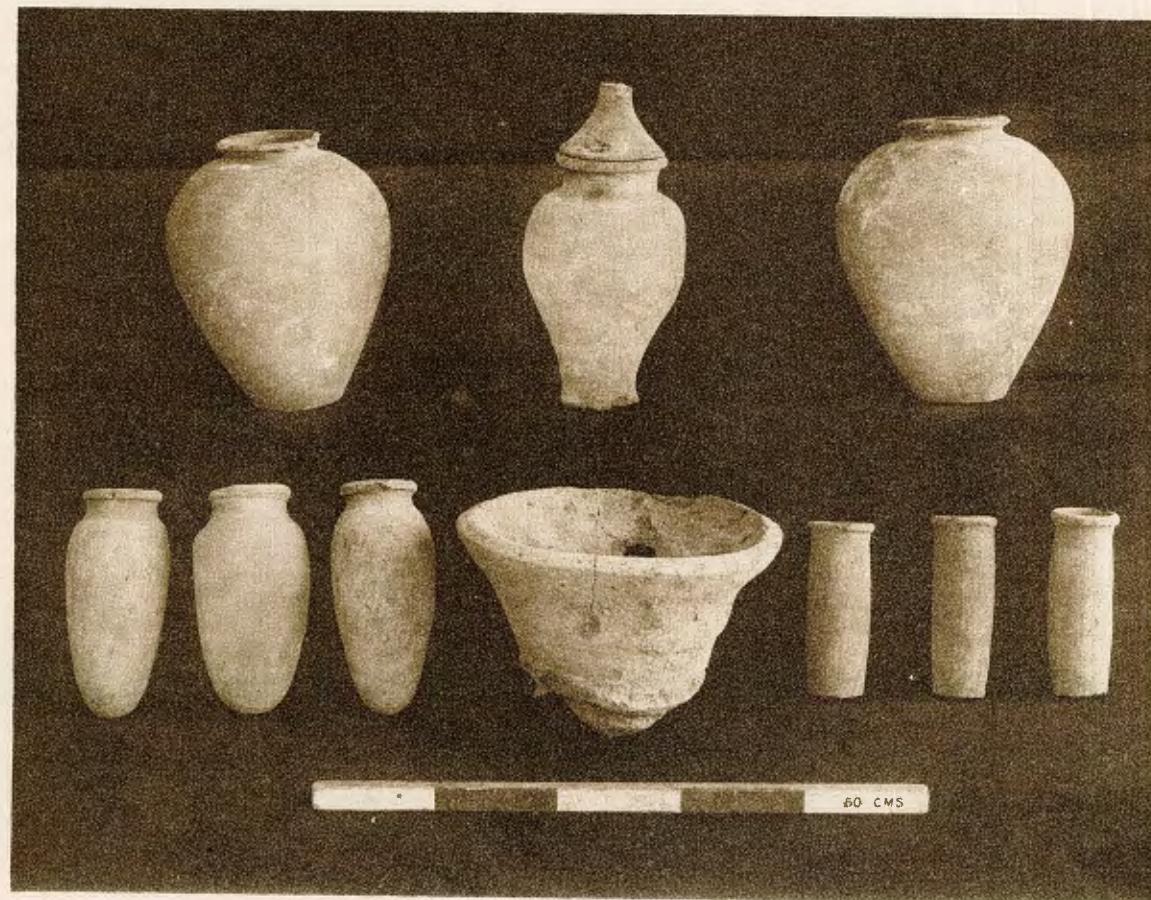
B. COIL OF ROPE.



EXAMPLES OF POTTERY.

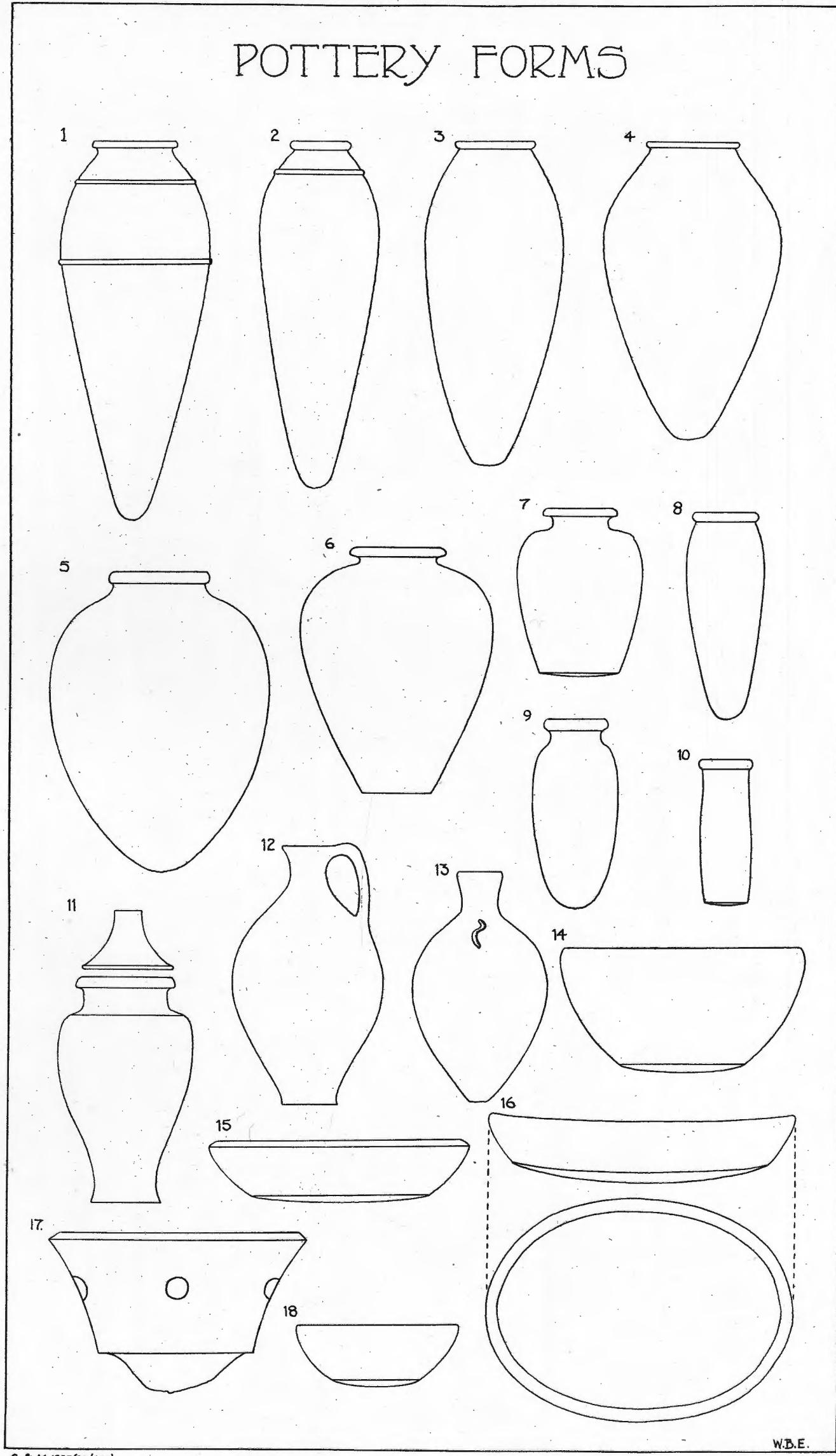


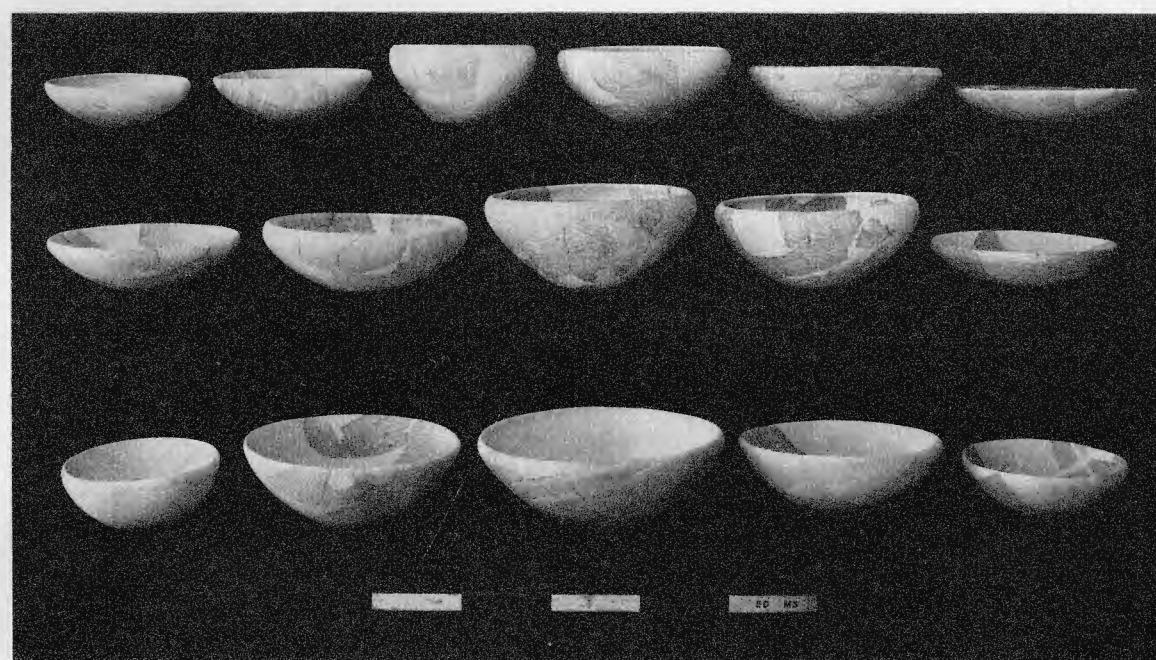
EXAMPLES OF POTTERY.



EXAMPLES OF POTTERY.

POTTERY FORMS

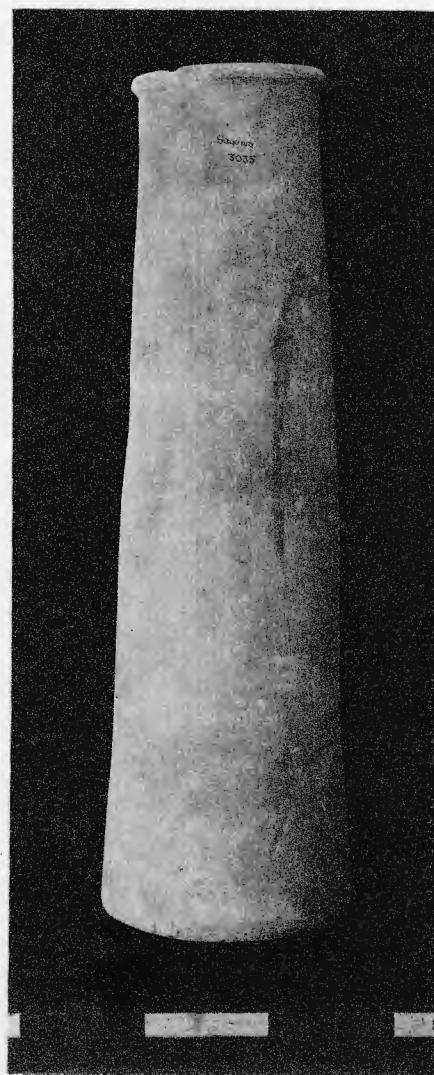
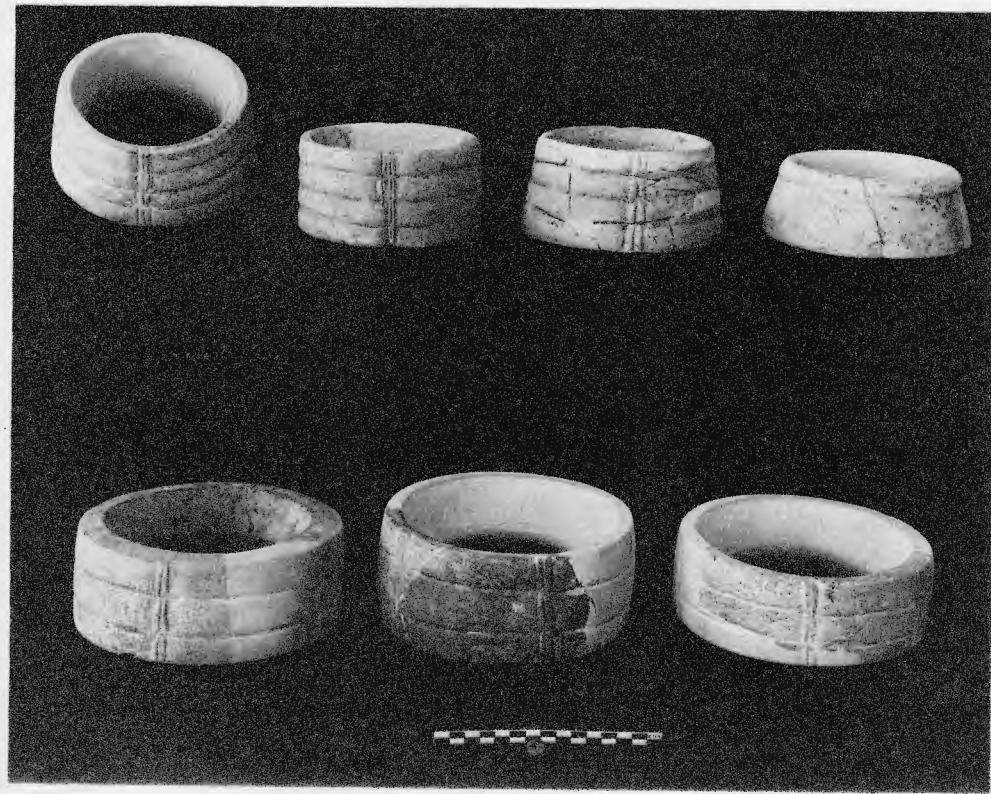




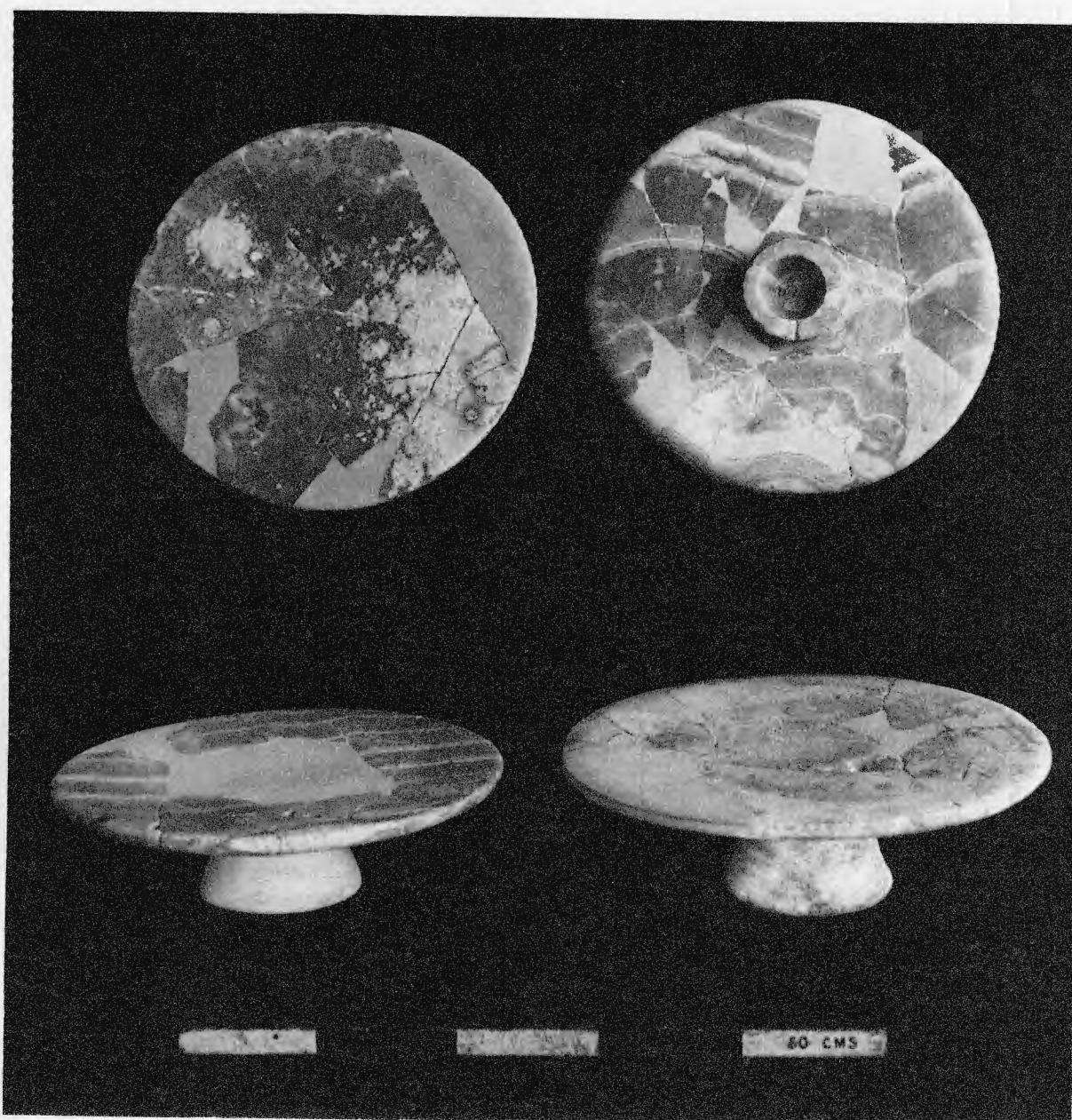
EXAMPLES OF STONE VESSELS.



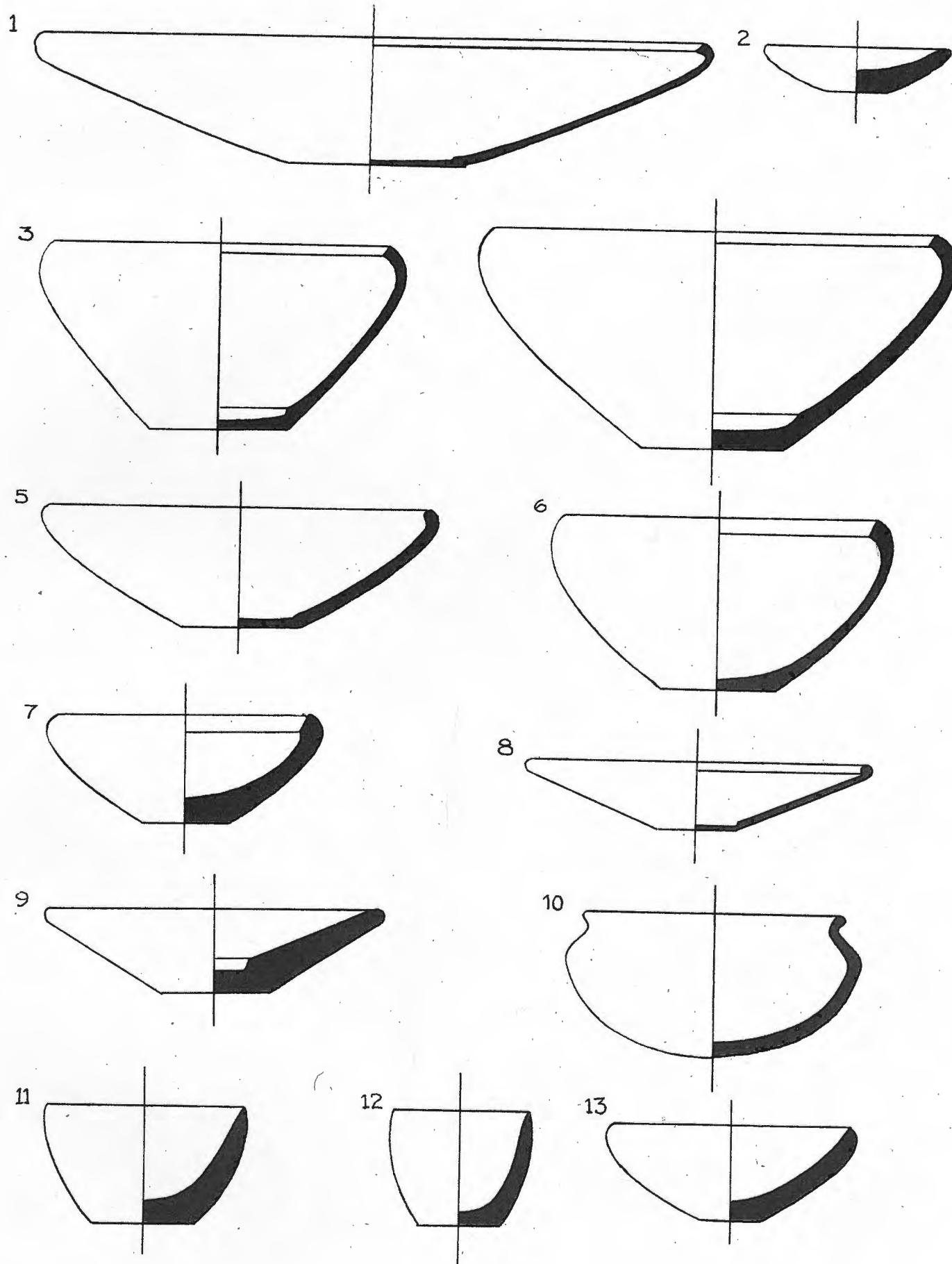
EXAMPLES OF STONE VESSELS.



STONE PEDESTALS.

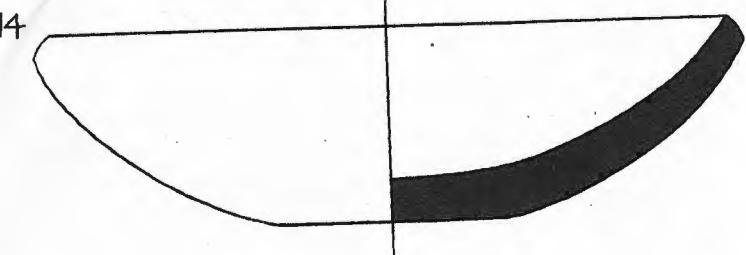


EXAMPLES OF STONE TABLES.

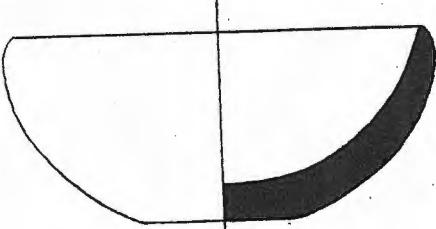


TYPES OF STONE VESSELS, ETC.

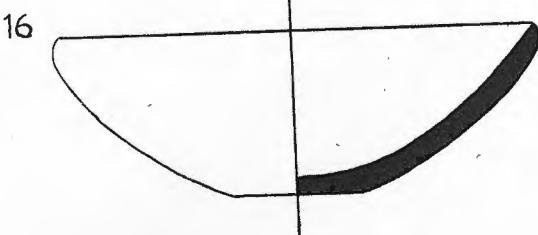
14



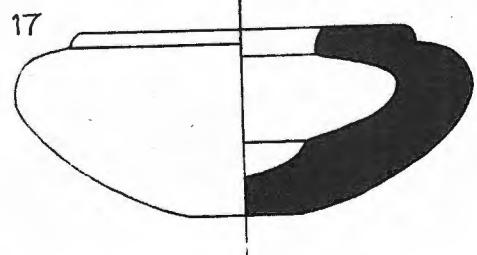
15



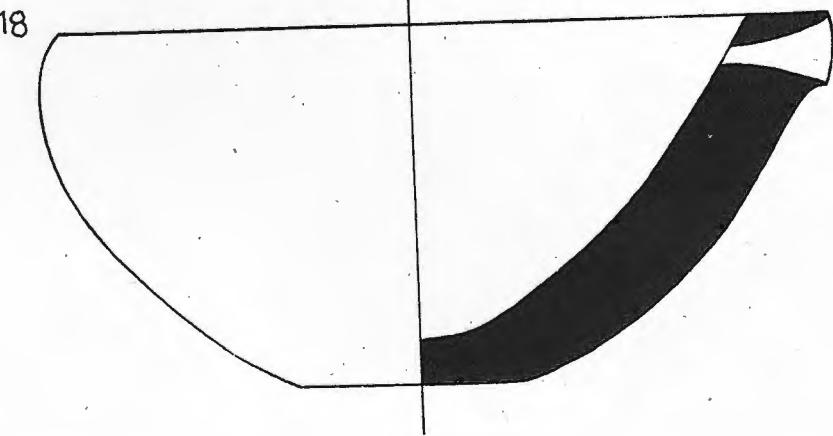
16



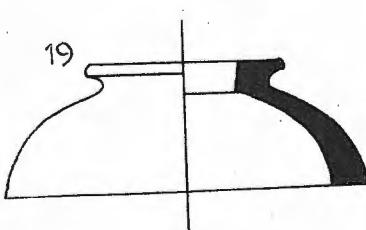
17



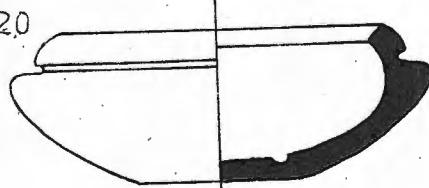
18



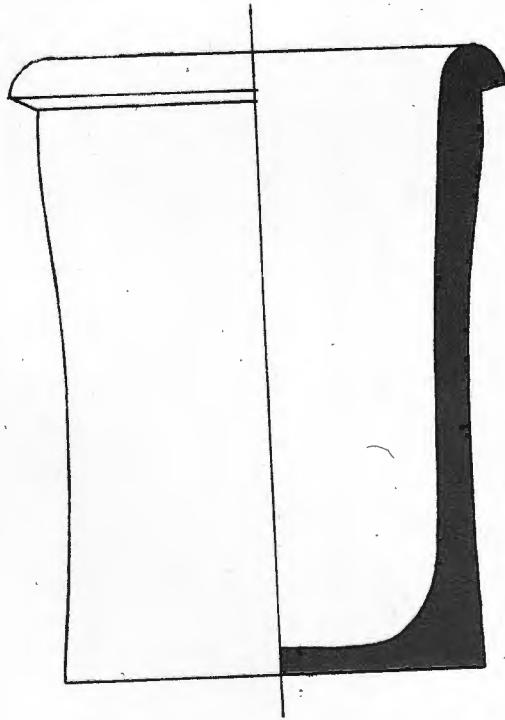
19



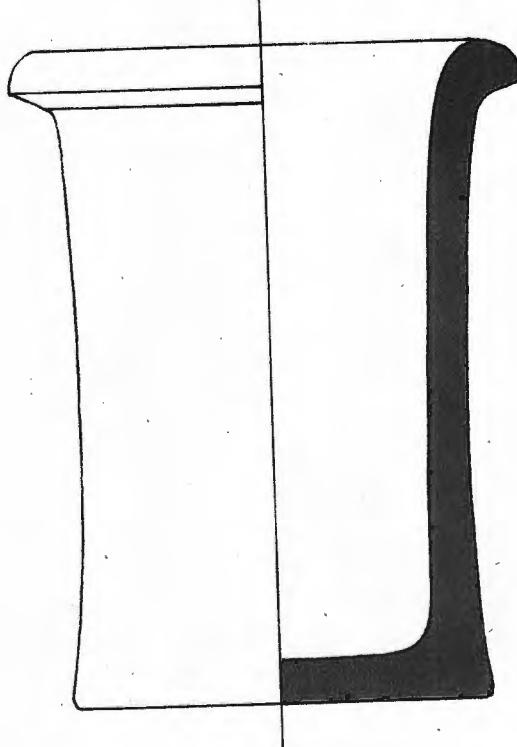
20



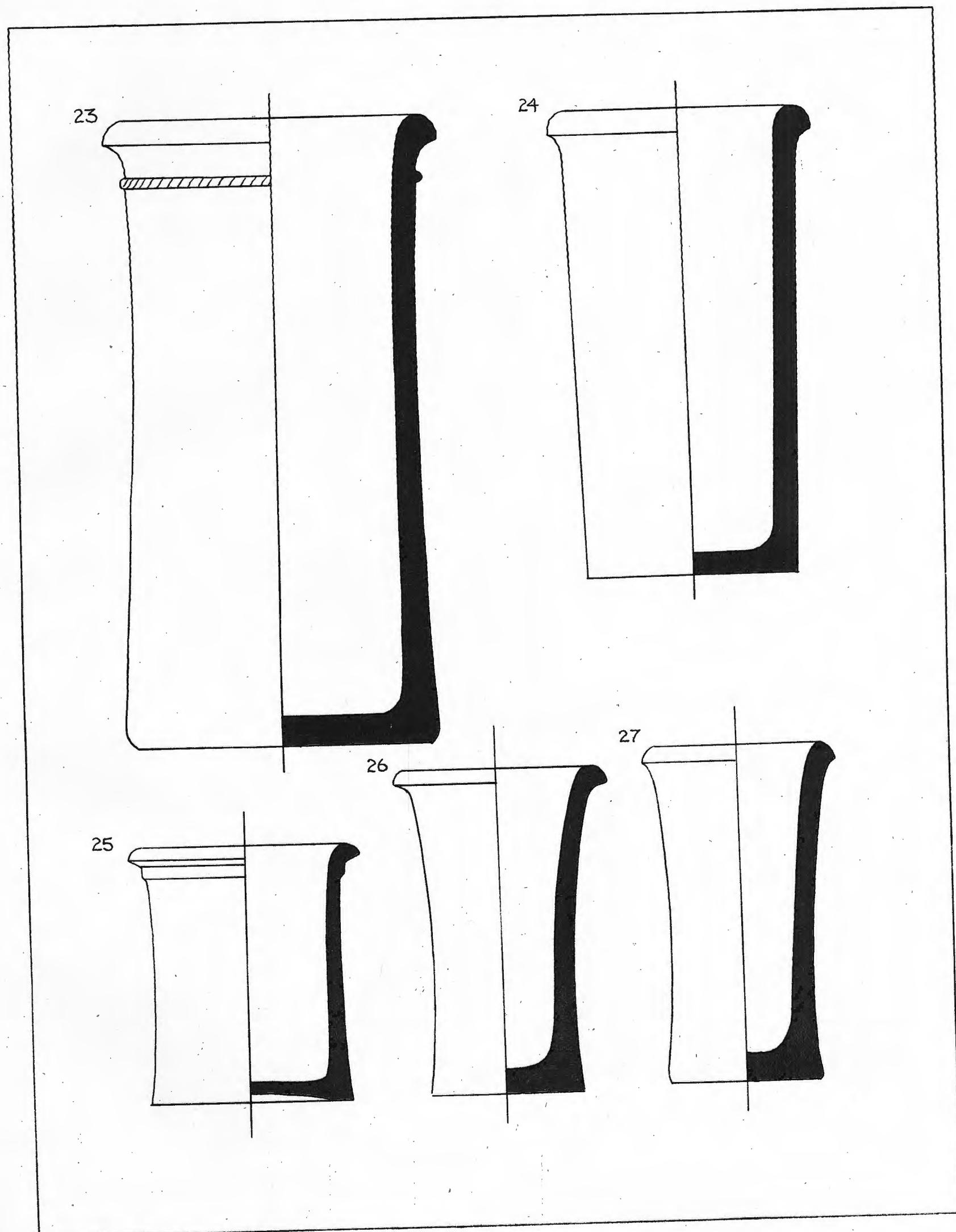
21



22



TYPES OF STONE VESSELS, ETC.

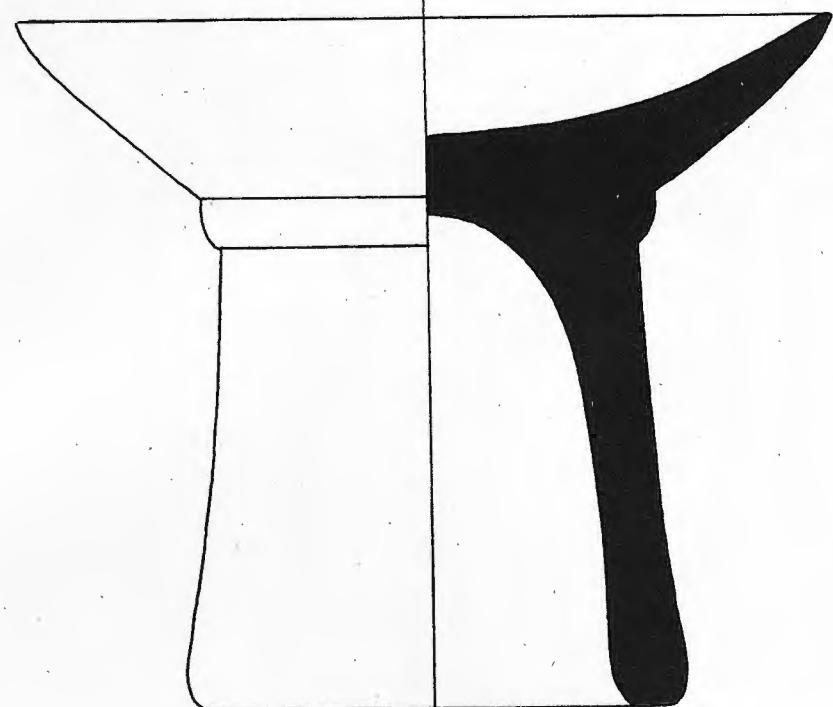


TYPES OF STONE VESSELS, ETC.

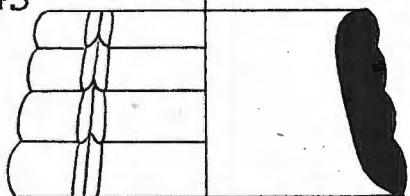


TYPES OF STONE VESSELS, ETC.

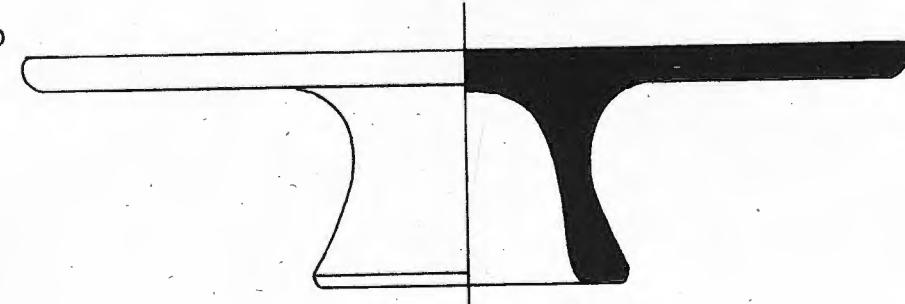
39



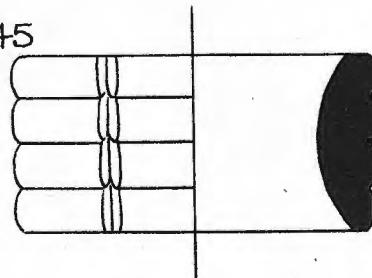
43



40



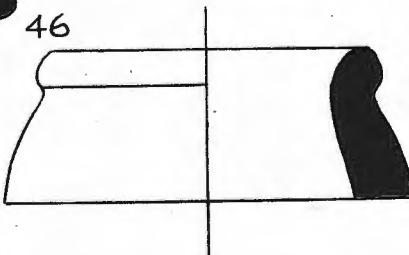
45



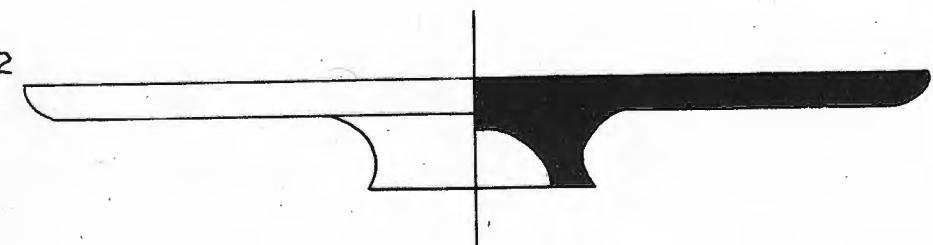
41



46

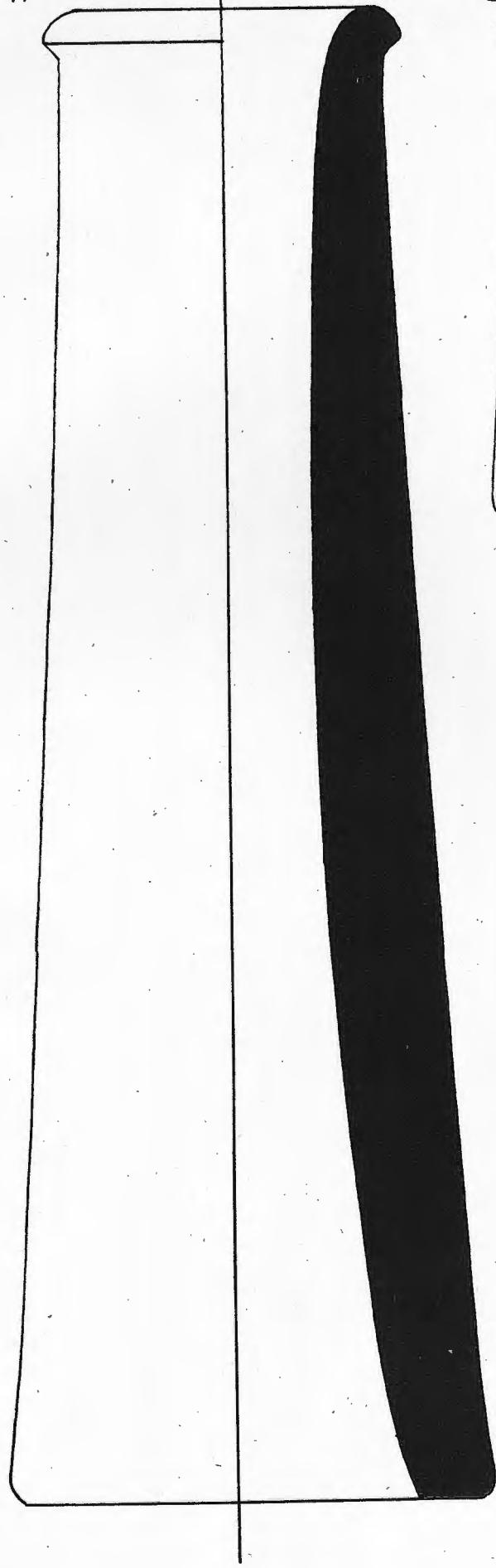


42

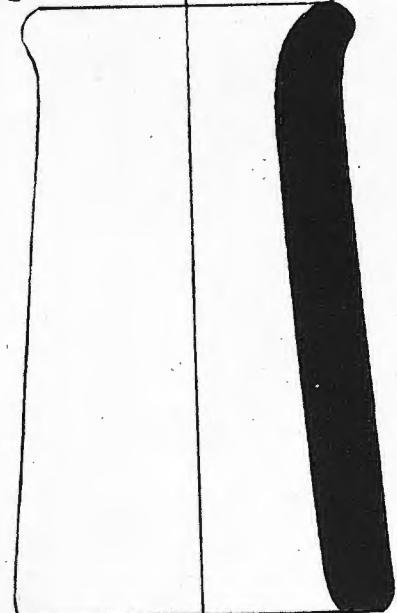


TYPES OF STONE VESSELS, ETC.

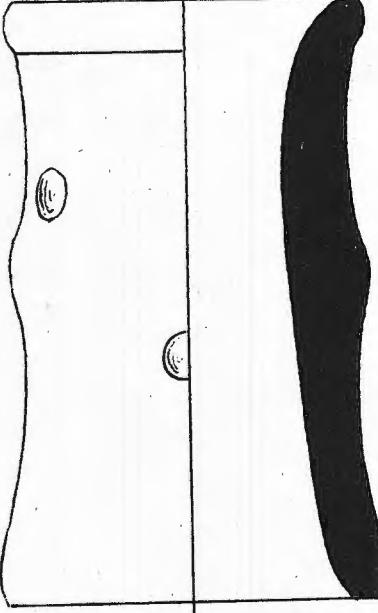
47



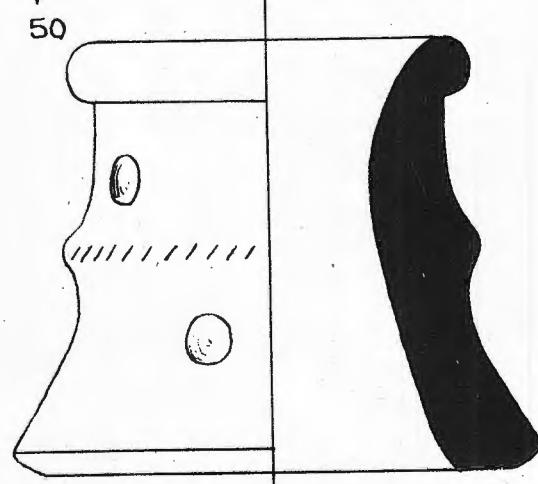
48



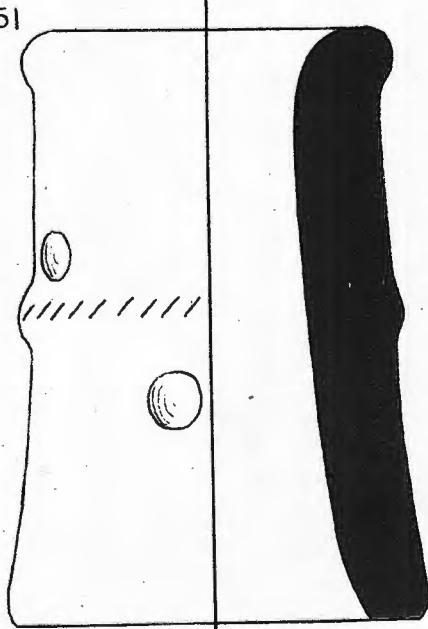
49



50

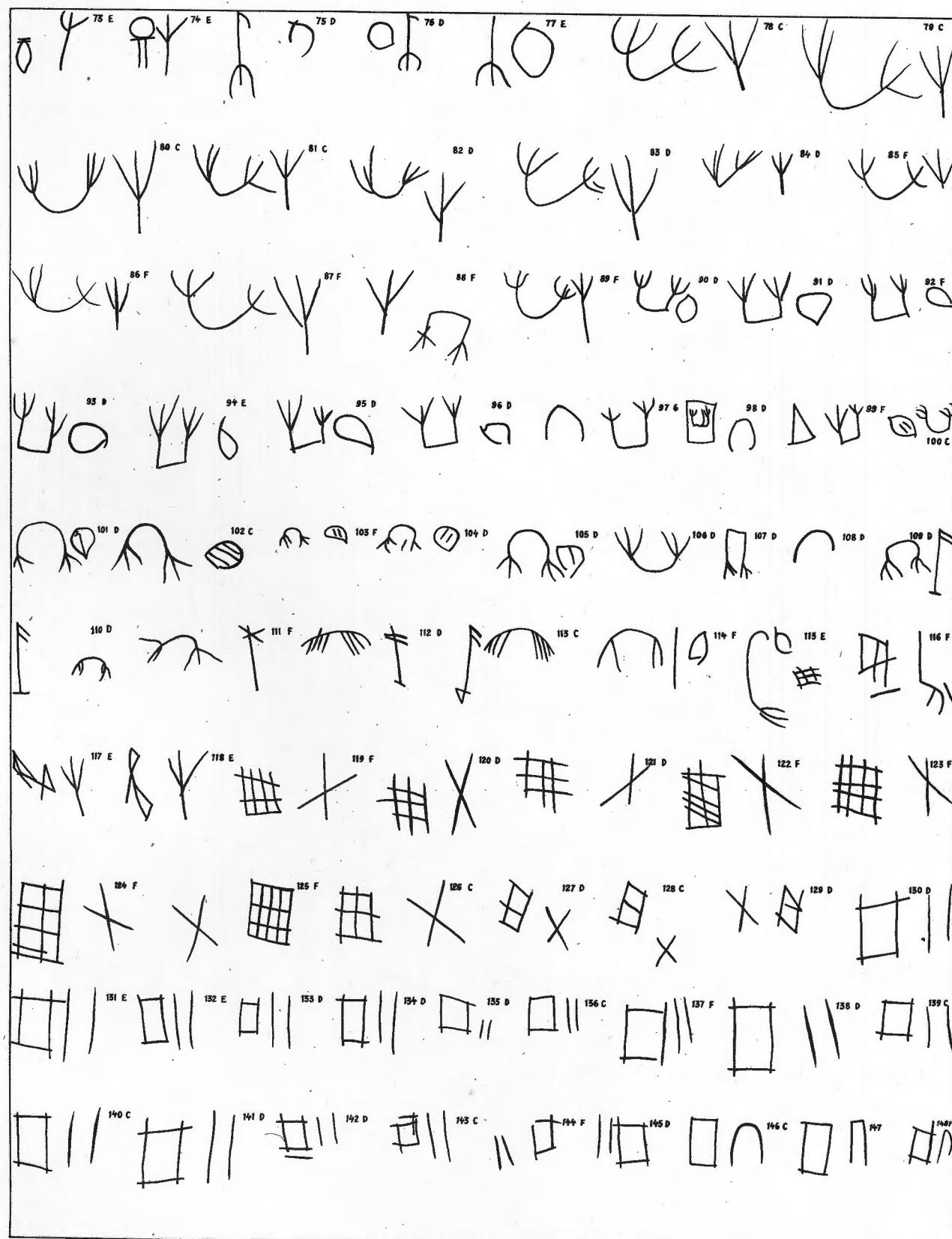


51

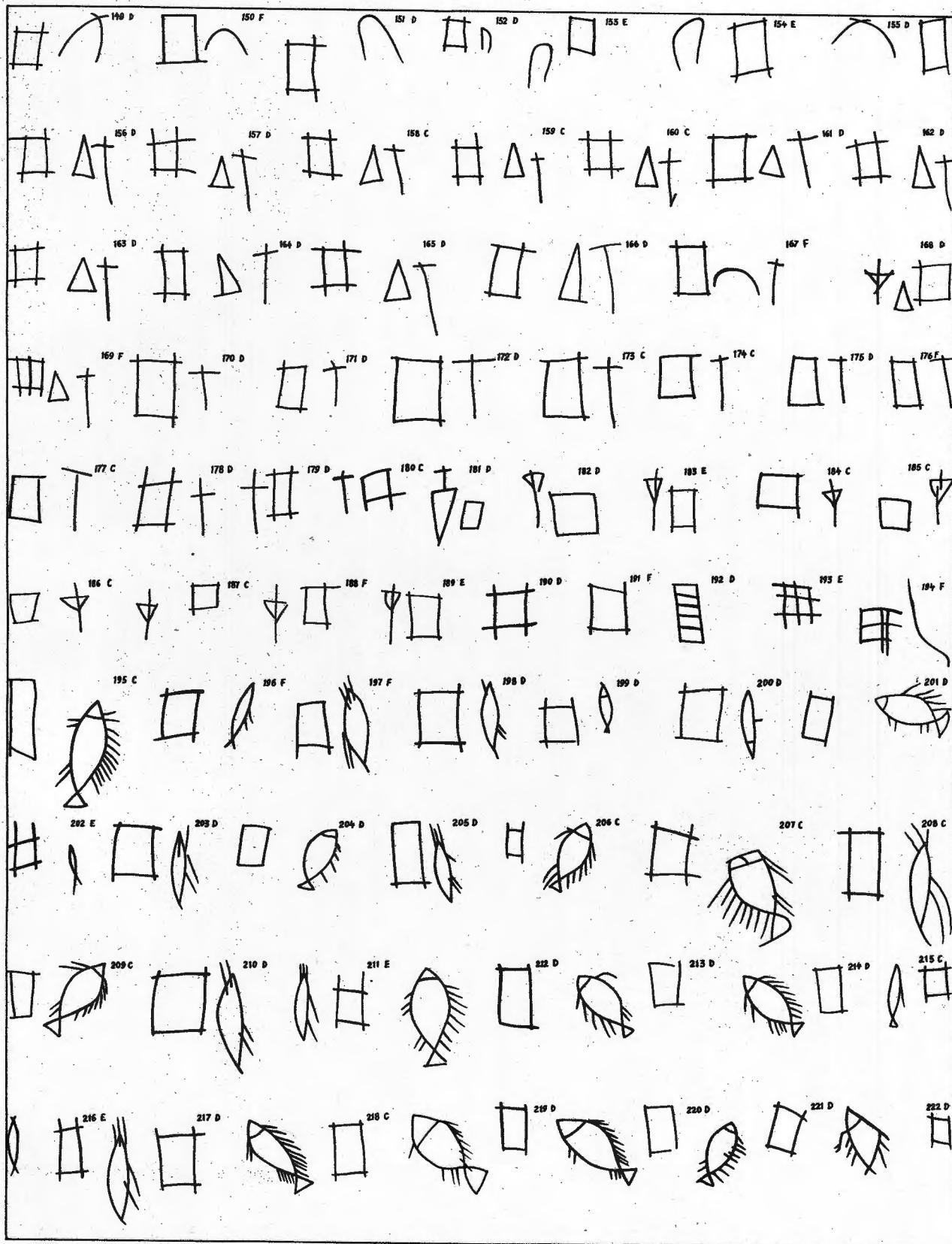


TYPES OF STONE VESSELS, ETC.

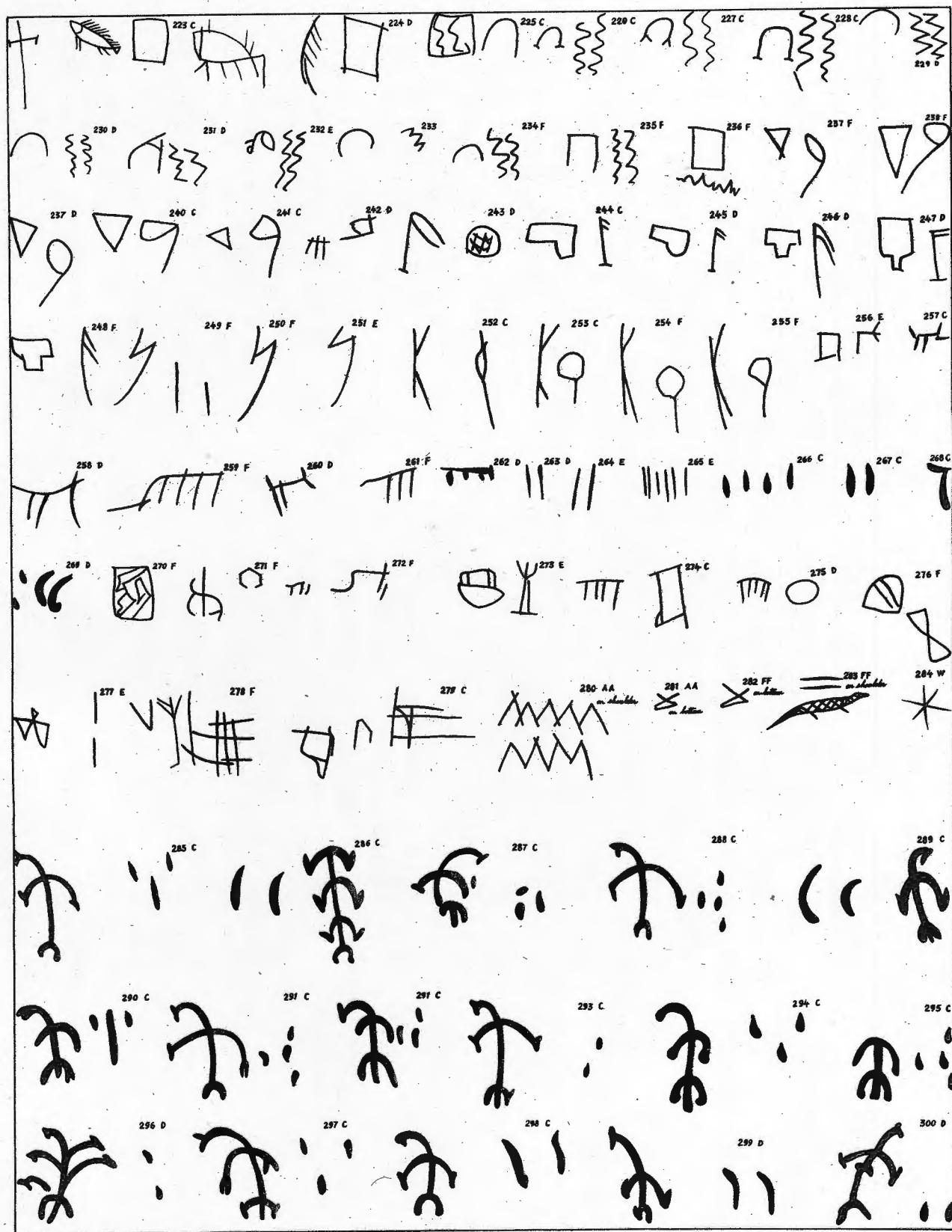




POT MARKS.



POT MARKS



S. & M. 1557 (27/281).

POT MARKS.

